

```

ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
chain bonds :
2-13 14-15
ring bonds :
1-2 1-6 5-10 2-3 3-4 4-5 5-6 5-11 6-7 7-8 7-13 8-9 8-16 9-10 11-12 12-13 13-14 14-15 15-16 17-18 17-23 18-24 18-28 19-20 20-21 21-22 22-23 24-25 25-26 26-27 27-28
exact bonds :
2-17 14-18
normalised bonds :
1-2 1-6 1-10 2-3 3-4 4-5 5-6 5-11 6-7 7-8 7-13 8-9 8-16 9-10 11-12 12-13 13-14 14-15 15-16 17-18 17-23 18-24 18-28 19-20 20-21 21-22 22-23 24-25 25-26 26-27 27-28
isolated ring systems :
containing 1

```

Match level :

11Atom 21Atom 31Atom 41Atom 51Atom 61Atom 71Atom 81Atom 91Atom 101Atom 111Atom 121Atom 131Atom 141Atom 151Atom 161Atom 171Atom 181Atom 191Atom 201Atom 211Atom 221Atom 231Atom 241Atom 251Atom 261Atom 271Atom 281Atom

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L3 STRUCTURE UPLOADED

=> a 11 see full
FULL SEARCH INITIATED 10:10:14 FILE "REGISTER"
FULL SEARCH SEARCH COMPLETED - 69792 TO ITERATE
100 0% PROCESSED 69792 ITERATIONS 911 ANSWERS
SEARCH TIME: 00.00.01

L3 911 SEA RES FULL L3

=> a 12
L3 269 L3

=> 13 and (electroluminescent or electroluminescence or (light emitting) or (light emission) or oled)
107569 ELECTROLUMINESCENT
8 ELECTROLUMINESCENT
107571 ELECTROLUMINESCENT
ELECTROLUMINESCENT OR ELECTROLUMINESCENTS
29473 ELECTROLUMINESCENCE
23 ELECTROLUMINESCENCES
29477 ELECTROLUMINESCENCE
ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES
5 ELECTROLUMINESCENCE
29478 ELECTROLUMINESCENCE
ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES
1450823 LIGHT
14338 LIGHTS
1455624 LIGHT
LIGHT OR LIGHTS
164916 EMITTING
286 EMITTINGOR
164978 EMITTINGOR
EMITTING OR EMITTINGOR
93908 LIGHT EMITTING
LIGHT (N) EMITTING
1450823 LIGHT
14338 LIGHTS
1455624 LIGHT
LIGHT OR LIGHTS
657848 EMISSION
125408 EMISSIONOR
728132 EMISSION
EMISSION OR EMISSIONS
190821 LIGHT EMISSION
LIGHT (N) EMISSION
94139 OLED
4663 OLEDs
11744 OLED
OLED OR OLEDs
L4 193 L3 AND (ELECTROLUMINESCENT OR ELECTROLUMINESCENCE OR (LIGHT EMITTING OR LIGHT EMISSION) OR (LIGHT EMITTING OR LIGHT EMISSION) OR OLED)

=> 14 and ((pvc<2005 or sty<2005)
26345038 PVC<2005
15792023 STY<2005
L5 59 L4 AND (PVC<2005 OR STY<2005)

=> d 1b1b abn butatr 1=
YOU HAVE REQUESTED DATA FROM 59 ANSWERS - CONTINUED 3/(N) 1/1

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L5 ANSWER 1 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2011313023 CAPLUS [EMLUS](#)

Document Number

154348467

Title

Organic electroluminescence devices

Author/Inventor

Kawamura, Hiroyuki; Kubota, Mineyuki; Furubayashi, Masakazu

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

Jpn Tokkyo Koho, 44pp CODEN JTXOXX

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | IND | DATE | APPLICATION NO | DATE |
|---------------|-----|----------|----------------|----------|
| JP 4653469 | B2 | 20110316 | JP 2004-346675 | 20041201 |
| JP 2008156888 | A | 20080615 | | |

| | | | | |
|----------------|----|-----------|------------------|----------|
| WO 2004059512 | A1 | 200405408 | WO 2005-3921469 | 20051122 |
| CN 101049299 | A | 20071107 | CN 2005-80041191 | 20051122 |
| CN 100969964 | C | 20091202 | | |
| US 20040158102 | A1 | 20040720 | US 2005-289281 | 20051129 |
| US 7528542 | B2 | 20090505 | | |
| KR 2007091280 | A | 20070916 | KR 2007-7012284 | 20070531 |
| JP 2010283884 | A | 20101216 | JP 2010-190577 | 20100906 |

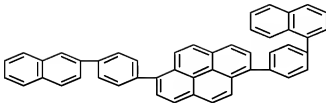
Abstract

Disclosed is an organic electroluminescent device comprising at least an anode, a cathode and an organic light-emitting layer interposed between the electrodes, wherein the organic light-emitting layer contains at least materials, a hole-trapping dopant and an electron-trapping dopant. By having the hole-trapping dopant and the electron-trapping dopant in the organic light-emitting layer, the organic electroluminescent device can have a longer life.

Hit Structure

CAS Registry Number
870714-31-7 CAPLUS

Chemical or Trade Name
Eyrone, 1-(4-(12-naphthalenyl)phenyl)-6-(4-(12-naphthalenyl)phenyl)- ICA
INFORM NAME:



OF CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITING)

US ANSWER 2 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2008 R0985 CAPLUS [Fulltext](#)

Document Number
151159940

Title
Organic electroluminescent device allowing adjustment of chromaticity

Author/Inventor
Yasuhito, Masaru

Patent Assignee/Corporate Source
Fujifilm Photo Film Co., Ltd., Japan

Source
U.S. Pat. Appl. Publ., 13 pp. CODEN USXXCO

Document Type
Patent

Language
English

Patent Information

| PATENT NO | KIND | DATE | APPLICATION NO | DATE |
|----------------|------|----------|------------------|----------|
| US 20080189971 | A1 | 20080807 | US 2006-579061 | 20061027 |
| TW 267922 | B | 20061201 | TW 2004-132026 | 20040429 |
| WO 2009104835 | A1 | 20090310 | WO 2004-096304 | 20040430 |
| CN 1977301 | A | 20070406 | CN 2004-80042922 | 20040430 |
| CN 100487776 | C | 20080913 | | |
| KR 2007020051 | A | 20070216 | KR 2006-7004070 | 20061128 |
| KR 836542 | B1 | 20080610 | | |

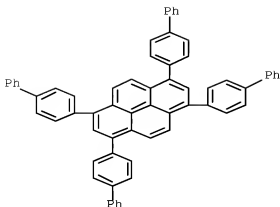
Abstract

Organic electroluminescent devices comprising an organic electroluminescent element comprising electrodes with an organic electroluminescent layer emitting white light at a chromaticity corresponding to a drive condition provided between the electrodes, and a drive unit driving the organic electroluminescent element by application of current or voltage and controlling the drive current and the period the current or voltage is applied per unit of time according to a chromaticity adjustment input, wherein in response to a first chromaticity adjustment input the drive unit controls, resp., the drive current or voltage to be a first current or voltage and the application period to be a first period, and in response to a second chromaticity adjustment input the drive unit controls, resp., the drive current or voltage to be a second current or voltage larger than the first current or voltage and the application period to be a second period shorter than the first period. Emission chromaticity can be adjusted while the brightness is kept constant. A liquid crystal display device employing an organic electroluminescent device as a backlight unit are also described.

Hit Structure

CAS Registry Number
790273-07-3 CAPLUS

Chemical or Trade Name
Eyrone, 1,3,6,8-tetrakis[1,1'-biphenyl]-4-yl)- ICA
INFORM NAME:



06 CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

15 ANSWER 3 OF 89 CAPLUS COPYRIGHT 2011 ACS on GTN

Accession Number
2008 873039 CAPLUS Fulltext

Document Number
150 338448

Title
Preparation of aromatic amine derivatives as doping materials for organic electroluminescent devices

Author/Inventor
Furubashi, Masakazu, Kubota, Mineyuki

Patent Assignee/Corporate Source
Idemitsu Kasei Co., Ltd., Japan

Source
Jpn. Tokyo Koho, Sapp., Chemical Indexing Equivalent to 145 356327 (WO) CODEN: JTKXFF

Document Type
Patent

Language
Japanese

Patent Information

| PATENT NO | KIND | DATE | APPLICATION NO | DATE |
|----------------|------|-----------|------------------|----------|
| JP 4263709 | B2 | 200909513 | JP 2005-73474 | 20050315 |
| JP 200825879 | A | 20080926 | | |
| WO 2006090060 | A1 | 20060921 | WO 2006-JP200516 | 20060117 |
| EP 1880096 | A1 | 20071125 | EP 2006-711796 | 20060117 |
| US 20060210830 | A1 | 20060921 | US 2006-33655 | 20060123 |
| US 7818017 | B2 | 20101019 | | |
| KR 2007110362 | A | 20071116 | KR 2007-702053 | 20070913 |
| IN 2007CN40053 | A | 20071123 | IN 2007-CN40053 | 20070917 |
| CN 101142189 | A | 20080312 | CN 2006-6006034 | 20070917 |
| US 20110034733 | A1 | 20110210 | US 2010-804247 | 20100811 |

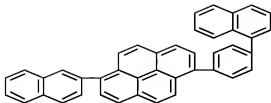
Abstract

The title compounds I [T1 = (A1)a, T2 = (A2)b, T3 = (A3)c, T4 = (A4)d, A1-A4 = H, Me, Et, etc.; a, b, c, d = 0-3, A5-A12 = Me, Et, Ph, etc.] are prepared. Thus, the title compound II was prepared from the coupling reaction of 6,12-dibromocyclopentadiene with 2,9,4-dimethylphenylamine. An organic electroluminescent device containing II showed blue light and luminescence efficiency 7.1 cd/m² under voltage of 6.5 V.

HR Structure

CAS Registry Number
870774-21-5 CAPLUS

Chemical or Trade Name
Fylene, 1-(2-naphthalenyl)-6-(4-[1-naphthalenyl]phenyl)- (CA INDEX NAME)



06 CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

Accession Number
2067 842480 CAPLUS [Fulltext](#)
Document Number
14782066

Title
Anthracene derivatives for use in organic electronic devices and their synthesis and the devices

Author/Inventor
Hof, Holger; Bausang, Arne; Gloaguel, Philipp
Patent Assignee/Corporate Source
Merck Patent GmbH, Germany

Source
PCT Int. Appl., 57pp. CODEN: PUXYD2
Document Type
Patent

Language
German

Patent Information

| PATENT NO | KIND | DATE | APPLICATION NO | DATE |
|-----------------|------|----------|----------------------|----------|
| WO 200705678 | A1 | 20070614 | WO 2006-EP11798 | 20061207 |
| UK 102035058583 | A1 | 20070614 | UK 2005-102005058583 | 20051204 |
| EP 1957666 | A1 | 20080620 | EP 2006-629379 | 20061207 |
| JP 200918342 | T | 20090507 | JP 2006-543731 | 20061207 |
| US 20080303423 | A1 | 20081211 | US 2006-96536 | 20060606 |

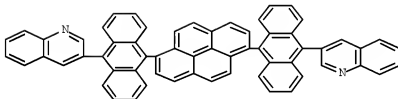
Abstract

Comps. are described which comprise two substituted anthracene groups joined (at the 9 position) by a 1 aromatic ring system and having at least a C5-10 (hetero)aromatic ring substituent at each 10 position, optionally with other substituents situated on the remaining positions. A method for synthesizing the comps. is described which entails forming the bonds between the anthracene groups and the aromatic groups using a Suzuki coupling reaction. The use of the comps. in electronic devices and devices employing the comps. (e.g., organic field-effect transistors, organic thin-film transistors, organic light-emitting transistors, organic integrated circuits, organic solar cells, organic field quenching devices, organic laser diodes, organic photoreceptors, and, especially, organic electroluminescent devices) are also described.

Hit Structure

CAS Registry Number
939913-11-4 CAPLUS

Chemical or Trade Name
Quinoxaline, 2,3'-[2,6'-pyrenediyl]di-10,9-anthracenediyl]bis- (CA INDEX NAME)



US ANSWER 5 OF 89 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2007 63739 CAPLUS [E\(6-79\)](#)
Document Number
147 62038

Title
Organic blends for electronic devices, their use in electronic devices, especially electroluminescent devices, and the devices

Author/Inventor
Vestenberg, Horst, Stossel, Philipp, Hell, Holger
Patent Assignee/Corporate Source
Merck Patent GmbH, Germany

Source
PCT Int. Appl., 61pp. CODEN: P60X22

Document Type
Patent

Language
German

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----------------|------|----------|----------------------|----------|
| WO 200705547 | A1 | 20070614 | WO 2006-EP11005 | 20061117 |
| DE 102005058557 | A1 | 20070614 | DE 2005-102005058557 | 20051204 |
| EP 1957623 | A1 | 20080820 | EP 2006-818609 | 20061117 |
| JP 200518631 | T | 20060507 | JP 2006-543682 | 20061117 |
| US 20080297037 | A1 | 20081204 | US 2006-96492 | 20060606 |
| CN 101328260 | A | 20081217 | CN 2006-50046146 | 20060606 |
| KR 2008026861 | A | 20080911 | KR 2006-7016431 | 20060707 |
| IN 2008KN02737 | A | 20090123 | IN 2008-KN2737 | 20080707 |

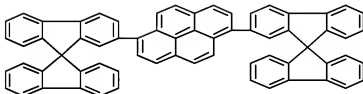
Abstract

Blends are described which comprise α 1 heteroarylene(heteroarylene) compound and α 2 anthracene derivative with C9-10 heteroatom(s) substituents, including anthracene derivative comprising two anthracene groups joined at the 9 position by a single bond or a bridging group selected from C1-4b bridged groups, -O-, -S-, or -NR-. The use of the compounds in electronic devices and devices employing the compounds (e.g., organic field-effect transistors, organic thin-film transistors, organic light-emitting transistors, organic integrated circuits, organic solar cells, organic field quenching devices, organic laser diodes, organic photo receptors, and, especially, organic electroluminescent devices) are also described. Methods for producing electroluminescent devices including forming films from the blends are also described.

HR Structure

CAS Registry Number
723295-32-1 CAPLUS

Chemical or Trade Name
9,9'-Spiro[3.9]10-fluorene], 2,2'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



US ANSWER 6 OF 89 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2007 58332 CAPLUS [E\(6-79\)](#)
Document Number
147 41938

Title
Luminescent material containing pyrene compound and light-emitting device employing it

Author/Inventor
Ogawa, Takashi, Tomioka, Takashi, Murase, Seikichi
Patent Assignee/Corporate Source
Toray Industries, Inc., Japan

Source
Jpn. Kokai Tokkyo Koho, 23pp. OODEN: J0004F

Document Type
Patent

Language
Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|-----------------|----------|
| JP 20071311923 | A | 20070531 | JP 2005-325740 | 20051110 |

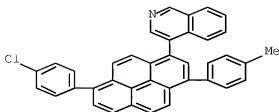
Abstract

The invention relates to a luminescent material and a light-emitting device employing it. The above material consists of the pyrene compound represented by the general formula (1), where R1-R15 is selected from the fused rings formed between adjacent substituents, such as hydrogen, the alkyl group, the cycloalkyl group, the heterocyclic group, A is directly bonded to at least one of R1-R10, Y1-Y5 is selected from nitrogen or carbon atom, when one of Y1-Y5 is nitrogen atom, the substituent of R11-R15 on the nitrogen atom does not exist.

HR Structure

CAS Registry Number
936713-68-5 CAPLUS

Chemical or Trade Name
Isquinoline, 4-[3-(4-chlorophenyl)-3-(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



LS ANSWER 7 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number: 2007583549 CAPLUS File No.

Document Number: 146330861

Title:

Luminescent material and light-emitting device employing it

Author/Inventor:

Ogawa, Takashi; Murase, Seishiro; Nagao, Kazuma

Patent Assignee/Corporate Source:

Toray Industries, Inc., Japan

Source:

Jpn. Kokai Tokkyo Koho, 22pp. CODEN JOKAF

Document Type:

Patent

Language:

Japanese

Patent Information:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2007131722 | A | 20070531 | JP 2005-325759 | 20051119 |

Abstract:

The invention relates to a luminescent material and light-emitting device employing it. The above material consists of anthracene compound represented by I, where A is the direct bond, the arylene group, etc. and R¹-R¹⁰ are H, the alkyl group, etc., at least one of R¹-R¹⁰ is the alkyl group, the aryl group, etc., at least one of R¹-R¹⁰ and R¹-R¹⁰ is used for the connection with A.

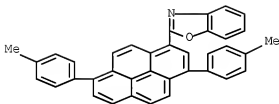
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CAS Registry Number:

908021-69-6 CAPLUS

Chemical or Trade Name:

Benzoazole, 2-[3,8-bis(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



CO CITING REF COUNT: 2

THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

LS ANSWER 8 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number: 2007352951 CAPLUS File No.

Document Number: 146390110

Title:

Blue light-emitting materials and devices using pyrene compounds

Author/Inventor:

Tagimoto, Kazunori; Murase, Seishiro; Nagao, Kazuma

Patent Assignee/Corporate Source:

Toray Industries, Inc., Japan

Source:

Jpn. Kokai Tokkyo Koho, 27pp. CODEN JOKAF

Document Type:

Patent

Language:

Japanese

Patent Information:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2007077185 | A | 20070329 | JP 2005-263426 | 20050912 |

Abstract:

The materials contain pyrene compounds: I (R¹-R¹⁴ = H, alkyl, cycloalkyl, heterocyclic group, alkynyl, cycloalkenyl, alkynyl, alkynyl, alkyne, aryl, ether, aryl ether, aryl ether, aryl, heterocyclic, CN, carbonyl, CO₂H, oxycarbonyl, carbamoyl, amino, phosphine oxide; R¹-R¹⁴ may form condensed ring with their adjacent groups; -1 of R¹-R¹⁴ and -1 of R¹-R¹⁴ = single bond; X¹ = O, S, NR¹⁵; Y¹-Y⁴ = N, C; -1 of Y¹-Y⁴ = N and -1 of Y¹-Y⁴ = C; R¹⁵ = H, alkyl, cycloalkyl, heterocyclic group, alkynyl, cycloalkenyl, alkynyl, aryl, heterocyclic, CN, carbonyl, CO₂H, oxycarbonyl, carbamoyl). The devices having light-emitting layers between anodes and cathodes and emitting light by elec. energy contain the materials. The devices show high luminescent efficiency.

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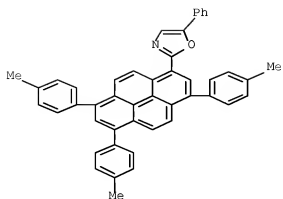
CAS Registry Number:

908011-37-4 CAPLUS

Chemical or Trade Name:

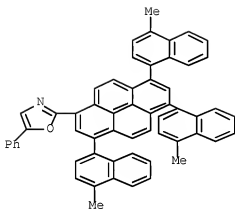
Oxazole, 3-phenyl-2-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)

NAME:



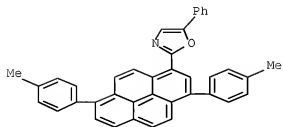
CAS Registry Number
90921-50-5 CAPI/OS

Chemical or Trade Name
Oxazole, 5-phenyl-2-(3,6,8-tris(4-methyl-1-naphthyl)-1-pyrenyl)- (CA INDEX NAME)



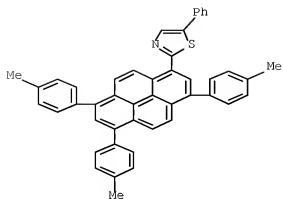
CAS Registry Number
90921-61-0 CAPI/OS

Chemical or Trade Name
Oxazole, 2-(3,8-bis(4-methylphenyl)-1-pyrenyl)-5-phenyl- (CA INDEX NAME)



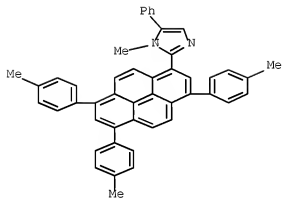
CAS Registry Number
90921-62-1 CAPI/OS

Chemical or Trade Name
Thiazole, 3-phenyl-2-(3,6,8-tris(4-methylphenyl)-1-pyrenyl)- (CA INDEX NAME)



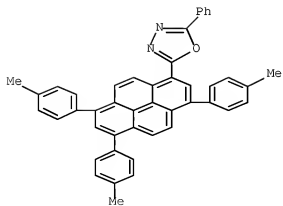
CAS Registry Number
908011-63-2 CAPLOG

Chemical or Trade Name
1*N*-imidazole, 1-methyl-5-phenyl-2-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]-
(CA INDEX NAME)



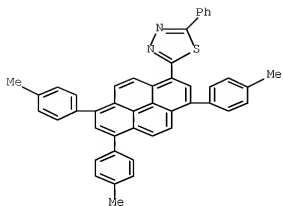
CAS Registry Number
908011-64-3 CAPLUS

Chemical or Trade Name
1,3,4-Oxadiazole, 2-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA
INDEX NAME)



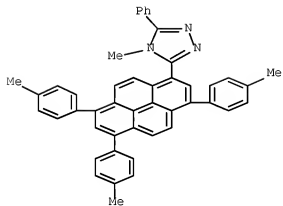
CAS Registry Number
900211-65-9 CAS#

Chemical or Trade Name
1,7,4-Trisubazole, 2-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA
INDEX NAME)



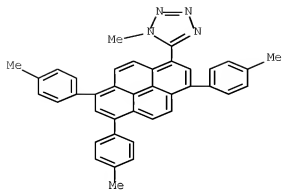
CAS Registry Number
900211-66-5 CAS#

Chemical or Trade Name
4B-1,1,4-Triazole, 6-methyl-3-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-
pyrenyl]- (CA INDEX NAME)



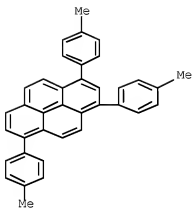
CAS Registry Number
930089-30-5 CAS#

Chemical or Trade Name
1B-Tetrazole, 1-methyl-5-[3,6,8-tris(4-methylphenyl)-3-pyrenyl]- (CA
INDEX NAME)



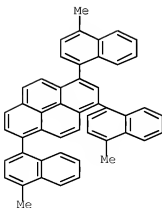
CAS Registry Number
909021-84-7 (CAFL08)

Chemical or Trade Name
Pyrene, 1,3,6-tris(4-methylphenyl)- (CA INDEX NAME)



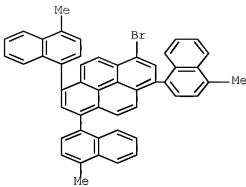
CAS Registry Number
909021-85-8 (CAFL08)

Chemical or Trade Name
Pyrene, 1,3,6-tris(4-methyl-1-naphthalenyl)- (CA INDEX NAME)



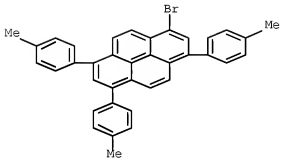
CAS Registry Number
908011-86-9 CAPLUS

| | |
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| Chemical or Trade Name | |
| Pyrene, 1-bromo-3,6,8-tris(4-methyl-1-naphthalenyl)- | (CA INDEX NAME) |



CAS Registry Number
930088-31-6 CAPLOG

Chemical or Trade Name
Pyrene, 1-bromo-3,6,8-tris(4-methylphenyl)- (CA INDEX NAME)



Accession Number
2007-23414 CAPLUS [Full text](#)
Document Number
146.121699

Title
Process for preparation of pyrene derivatives for use in organic electroluminescence devices

Author/Inventor
No. Mitsunori, Kubota, Mitsuaki
Patent Assignee/Corporate Source
Mitsubishi Kasei Co., Ltd., Japan

Source
PCT Int. Appl., 65pp. CODEN: P00XDR

Document Type
Patent

Language
Japanese

Patent Information

| PATENT NO. | CLASS | DATE | APPLICATION NO. | DATE |
|-----------------|-------|------------|------------------|------------|
| WO 2007/04384 | A1 | 2007/01/11 | WO 2006-JP310194 | 2006/05/23 |
| JP 2007/015961 | A | 2007/01/25 | JP 2005-137765 | 2005/07/04 |
| EP 1928754 | A1 | 2008/04/02 | EP 2006-746728 | 2006/05/23 |
| US 2008/0124571 | A1 | 2008/05/29 | US 2007-925813 | 2007/10/29 |
| US 7585574 | B2 | 2009/09/08 | | |
| CN 101213161 | A | 2008/07/02 | CN 2006-60024361 | 2008/01/03 |
| KR 2008/027332 | A | 2008/03/26 | KR 2006-7000282 | 2006/01/04 |
| IN 2006CN02622 | A | 2008/11/28 | IN 2006-CN622 | 2006/02/06 |

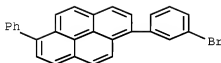
Abstract

This invention pertains to a method for producing pyrene devices via coupling reaction, for the use in organic electroluminescence devices comprising a neg. electrode and a pos. electrode and, interposed there between, one or two or more organic thin film layers including at least a light emitting layer, wherein at least one of the organic thin film layers contains the pyrene derivative alone or as a component of mixture. For example, the compound I was prepared in a three-step synthesis starting from pyrene-1-boronic acid and 3-bromo-1-iodobenzene in good yield. Thus, there is provided an organic electroluminescence device of high luminous efficiency capable of prolonged blue light emission.

Hit Structure

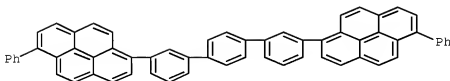
CAS Registry Number
918655-02-4 CAPLUS

Chemical or Trade Name
Pyrene, 1-(3-bromophenyl)-6-phenyl- (CA INDEX NAME)



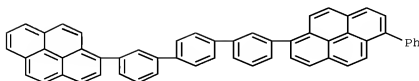
CAS Registry Number
918654-67-5 CAPLUS

Chemical or Trade Name
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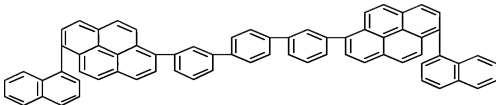
CAS Registry Number
918654-68-9 CAPLUS

Chemical or Trade Name
Pyrene, 1-phenyl-5-(3'-(1,2-pyrenyl)-2,2'-(4',3''-terphenyl)-3-yl)- (CA INDEX NAME)



CAS Registry Number
918654-69-0 CAPLUS

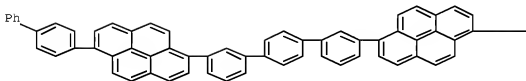
Chemical or Trade Name
 Pyrene, 1,3''-[3,3'-(4,4'-di-1''-terphenyl)]-3,3''-diylbis[6-(1-naphthalenyl)]-
 (CA INDEX NAME)



CAS Registry Number
 91854-19-3 CAS100

Chemical or Trade Name
 Pyrene, 1,3''-[3,3'-(4,4'-di-1''-terphenyl)]-3,3''-diylbis[6-(1,2'-biphenyl)]-6-yl-
 (CA INDEX NAME)

PAGE 1-A



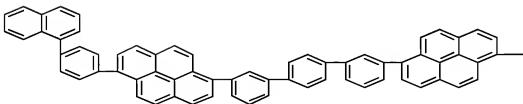
PAGE 1-B



CAS Registry Number
 91854-19-4 CAS100

Chemical or Trade Name
 Pyrene, 1,3''-[3,3'-(4,4'-di-1''-terphenyl)]-3,3''-diylbis[6-(6-(1-naphthalenyl)phenyl)]-
 (CA INDEX NAME)

PAGE 1-A



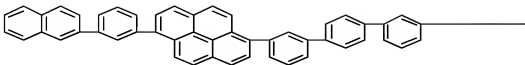
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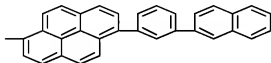
CAS Registry Number
91854-12-5 CAS103

Chemical or Trade Name
Pyrene, 1,2'-[2,1'4',1''-terphenyl]-3,3''-diylbis[6-(3-(2-naphthalenyl)phenyl)]- (CA INDEX NAME)

PAGE 1-A

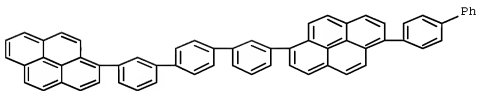


PAGE 1-B



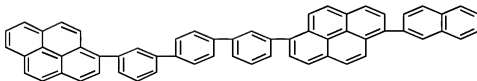
CAS Registry Number
91854-13-6 CAS103

Chemical or Trade Name
Pyrene, 1,2'-[2,1'4',1''-terphenyl]-4-yl-6-[3''-(1-pyrenyl)[1,1'4',1''-terphenyl]-3-yl]- (CA INDEX NAME)



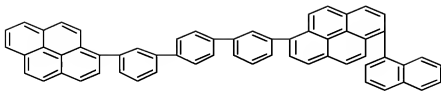
CAS Registry Number
91854-14-7 CAS103

Chemical or Trade Name
Pyrene, 2'-[2-naphthalenyl]-6-[3''-(2-pyrenyl)[1,1'4',1''-terphenyl]-3-yl]- (CA INDEX NAME)



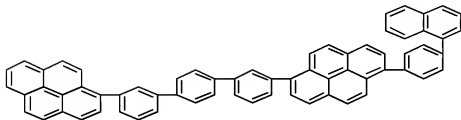
CAS Registry Number
91854-15-8 CAS103

Chemical or Trade Name
Pyrene, 2'-[1-naphthalenyl]-6-[3''-(2-pyrenyl)[1,1'4',1''-terphenyl]-3-yl]- (CA INDEX NAME)



CAS Registry Number
918654-10-9 CAS109

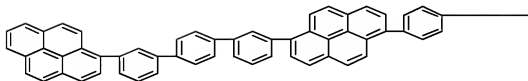
Chemical or Trade Name
Pyrene, 2-[4-[(2-naphthalenyl)phenyl]-6-[[3'-(1-pyrenyl)[1,2'-(4,4',1'')-terphenyl]-3-yl]]- (CA INDEX NAME)



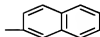
CAS Registry Number
918654-11-0 CAS110

Chemical or Trade Name
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PAGE 1-A



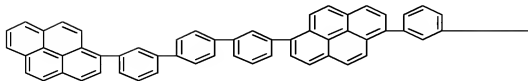
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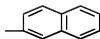


CAS Registry Number
918654-10-1 CAS108

Chemical or Trade Name
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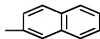
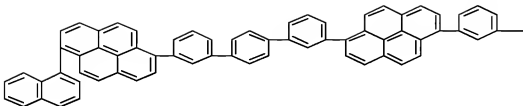
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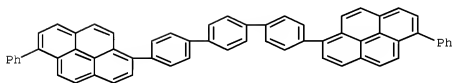
GAS Registry Number
91854-79-2 CASUS

Chemical or Trade Name
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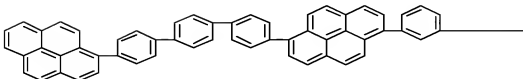
GAS Registry Number
91854-80-5 CASUS

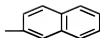
Chemical or Trade Name
Pyrene, 1,3'-[2,3',4'',1''-terphenyl]-6,4''-diphenyl- (CA INDEX NAME)



GAS Registry Number
91854-81-6 CASUS

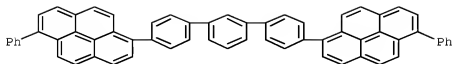
Chemical or Trade Name
Pyrene, 2-[2-(2-naphthalenyl)phenyl]-6-[4''-(1-pyrenyl)[1,3',4'',1''-terphenyl]-6-yl]- (CA INDEX NAME)





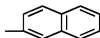
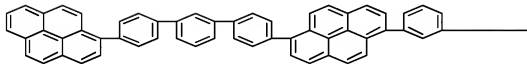
CAS Registry Number
918654-83-5 CASLIS

Chemical or Trade Name
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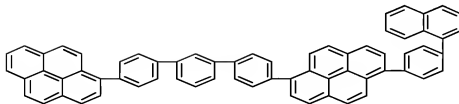
CAS Registry Number
918654-84-9 CASLIS

Chemical or Trade Name
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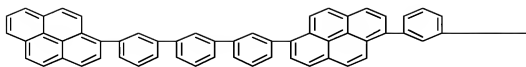
CAS Registry Number
918654-83-0 CASLIS

Chemical or Trade Name
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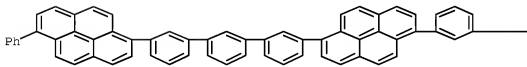
CAS Registry Number
918654-87-2 CASLIS

Chemical or Trade Name
Pyrene, 1-[3'-(2-naphthalenyl)phenyl]-6-[3''-(1-pyrenyl)[2,1'3',1''-terphenyl]-3-y]]- (CA INDEX NAME)



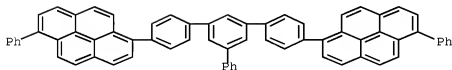
CAS Registry Number
918654-88-3 CAPLUS

Chemical or Trade Name
Pyrene, 1-[1,2,3,4-bis(phenyl)phenyl]-4-[3,3',4,4'-diphenyl-1-pyrenyl][1,2'-biphenyl-3-yl]- (CA INDEX NAME)



CAS Registry Number
918654-92-9 CAPLUS

Chemical or Trade Name
Pyrene, 2,3,3',4'-biphenyl[1,2',3',2''-terphenyl]-6,4''-diylbis[6-phenyl- (CA INDEX NAME)]



06 CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITING)

L5 ANSWER 10 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
0066 150804 CAPLUS [Full-text](#)
Document Number
14678199

Title
Multicyclic materials for organic electronic devices and devices using them

Author/Inventor
Hof, Holger; Bussing, Arne; Stoessel, Philipp; Vestweber, Horst

Patent Assignee/Corporate Source
Merck Patent GmbH, Germany

Source
PCT Int. Appl., 61pp. CODEN: P0XXD2

Document Type
Patent

Language
German

Patent Information

| PATENT NO | KIND | DATE | APPLICATION NO | DATE |
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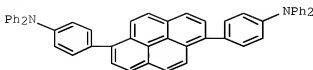
Abstract

The title compounds [A1, A2, R1 = H, (ar/substituted silyl, (un/substituted aryl, etc., m, n = 0 - 50; when m + n ≥ 2, substituents A1, A2 may be the same or different and may combine to form (un/saturated rings, x = 1 - 4, when x ≥ 2, the structures within the brackets may be the same or different, q = 0 - 5, when q ≥ 2, substituents R1 may be the same or different, X1 = (un/substituted aryl/en) are prepared. Thus, the title compound II was prepared from 1,6-dibromopyrene and 4-(diphenylamino)phenylboronic acid in presence of tetrakis(biphenylphosphine)potassium. An organic electroluminescent element containing II showed high light emission luminance and excellent high-temperature storage stability.

HR Structure

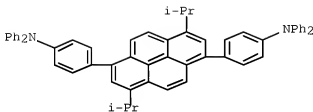
CAS Registry Number
913971-59-9 CASL09

Chemical or Trade Name
Benzeneamine, 4,4'-(1,6-pyrenediyl)bis[N,N-diphenyl]- (CA INDEX NAME)



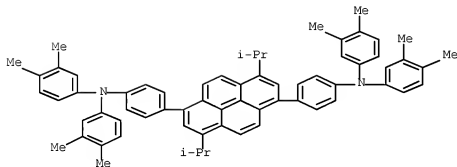
CAS Registry Number
913971-59-0 CASL09

Chemical or Trade Name
Benzeneamine, 4,4'-(3,8-bis(1-methylethyl)-1,6-pyrenediyl)bis[N,N-diphenyl]- (CA INDEX NAME)



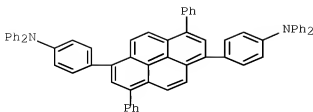
CAS Registry Number
913971-60-3 CASL09

Chemical or Trade Name
Benzeneamine, 4,4'-(3,8-bis(1-methylethyl)-1,6-pyrenediyl)bis[N,N-bis(3,4-dimethylphenyl)-1- (CA INDEX NAME)



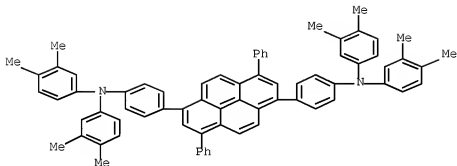
CAS Registry Number
913971-61-6 CASL09

Chemical or Trade Name
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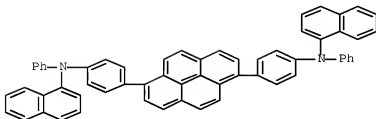
CAS Registry Number
913971-62-5 CAS1/05

Chemical or Trade Name
Diosuccinimide, 4,4'-(1,6-pyrenediyl)bis[N,N'-bis(3,4-
dimethylphenyl)-1,3-phenylene] (CA INDEX NAME)



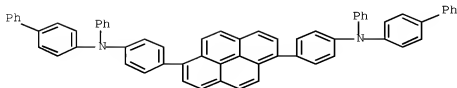
CAS Registry Number
913971-64-6 CAS1/05

Chemical or Trade Name
1-Naphthalenecarboxylic acid, N,N'-(1,6-pyrenediyl)-4,1-phenylenebis[N-phenyl-
(9CI)] (CA INDEX NAME)



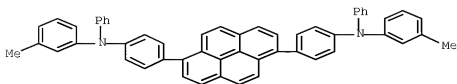
CAS Registry Number
913971-64-7 CAS1/05

Chemical or Trade Name
[2,2'-(8-phenyl)-1,1'-binaphthalene, N,N'-(1,6-pyrenediyl)-4,1-phenylenebis[N-phenyl-
(CA INDEX NAME)]



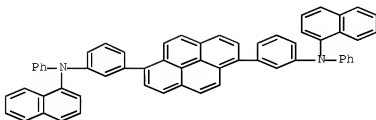
CAS Registry Number
913971-65-0 CAS1/05

Chemical or Trade Name
Benzenamine, 4,4'-(1,6-pyrenediyl)bis[N-(3-methylphenyl)-N-phenyl]- (CA INDEX NAME)



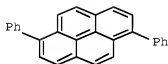
CAS Registry Number
913977-66-9 (CPL/US)

Chemical or Trade Name
1-Naphthalenamine, 8,8'-(1,6-pyrenediyl)di-3,1-phenylene)bis[N-phenyl]- (SC1) (CA INDEX NAME)



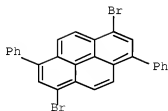
CAS Registry Number
55509-75-1 (CPL/US)

Chemical or Trade Name
Pyrene, 1,6-diphenyl- (CA INDEX NAME)



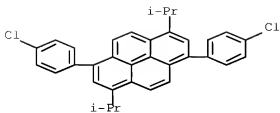
CAS Registry Number
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Chemical or Trade Name
Pyrene, 1,6-dibromo-3,8-diphenyl- (CA INDEX NAME)



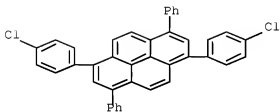
CAS Registry Number
913977-56-7 (CPL/US)

Chemical or Trade Name
Pyrene, 1,6-bis(4-chlorophenyl)-3,8-bis(1-methylethyl)- (CA INDEX NAME)



CAS Registry Number
91977-57-9 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-bis(4-chlorophenyl)-3,8-diisopropyl- (CA INDEX NAME)



LS ANSWER 12 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
20061097663 CAPLUS [Fulltext](#)

Document Number
148-459142

Title

Hybrid OLED having phosphorescent and fluorescent emitters

Author/Inventor

Tung, Yeh-Jun; Weaver, Michael S.; Hock, Michael; Esler, James

Patent Assignee/Corporate Source

Universal Display Corp., USA

Source

U.S. Pat Appl. Publ., 24 pp CODEN USXXCO

Document Type

Patent

Language

English

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|-----------------|----------|
| US 20040233194 | A1 | 20040519 | US 2005-105666 | 20050413 |
| WO 2006113106 | A1 | 20061026 | WO 2006-US12158 | 20060330 |

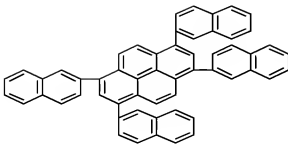
Abstract

An organic light emitting devices having a combined emission from at least two emissive materials, a fluorescent blue emissive material and a phosphorescent emissive material is described. The OLEDs may include three different emissive materials-a red emissive material, a green emissive material and a blue emissive material for white emission.

Hit Source

CAS Registry Number
887903-10-3 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetra-2-naphthalenyl- (CA INDEX NAME)



CS CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

US ANSWER 13 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN
 Accession Number
 20061030772 CAPLUS [Full-text](#)
 Document Number
 145407153

Title
 Arylene compounds and organic light-emitting devices using them
 Author/Inventor
 Kwang, Raymond; Nugent, Matthew
 Patent Assignee/Corporate Source
 Universal Display Corporation, USA
 Source
 U.S. Pat. Appl. Publ., 48 pp CODEN USXXCO
 Document Type
 Patent
 Language
 English
 Patent Information

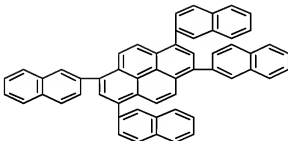
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|----------------|------|----------|-----------------|----------|
| US 20040222866 | A1 | 20040105 | US 2005-97352 | 20050404 |
| WO 2006107846 | A1 | 20061012 | WO 2006-US11211 | 20060327 |

Abstract
 Arylene compounds are described which comprise pyrene cores with 2-naphthyl derivative substituents at the 1, 3, 6, and 8 positions, the 3-naphthyl derivatives having H atoms at the positions adjacent to the attachment point (positions 1 and 8) and independently selected substituents or H atoms at other points. Organic light-emitting devices with organic layers including the naphthylpyrene compounds are also described.

Hit Structure

CAS Registry Number
 887905-35-3 CAPLUS

Chemical or Trade Name
 Pyrene, 1,3,6,8-tetra-2-naphthalenyl- (CA INDEX NAME)



US ANSWER 14 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN
 Accession Number
 20061037379 CAPLUS [Full-text](#)
 Document Number
 145407804

Title
 The organic electroluminescent elements and displays
 Author/Inventor
 Nakayama, Masaya
 Patent Assignee/Corporate Source
 Fuji Photo Film Co., Ltd., Japan
 Source
 Jpn. Kokai Tokkyo Koho, 31 pp CODEN JKKXAF
 Document Type
 Patent
 Language
 Japanese
 Patent Information

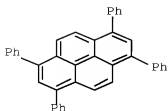
| PATENT NO | KIND | DATE | APPLICATION NO | DATE |
|----------------|------|----------|----------------|----------|
| JP 2004269470 | A | 20040105 | JP 2005-44925 | 20050323 |
| US 20070154735 | A1 | 20070705 | US 2006-386675 | 20060323 |

Abstract
 The disclosed organic electroluminescent element comprises a support, organic electroluminescent layers, at least one of which contains a 1,3,6,8-tetra-2-naphthylpyrene derivative and a triphenylbenzene derivative. The preferred triphenylbenzene derivative is 1,3,5-tris(4-n-carboxylphenyl)benzene. The electroluminescent element has high emission efficiency, good luminosity, and color purity.

Hit Structure

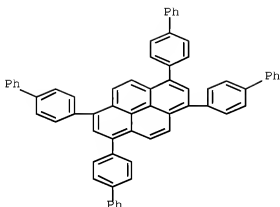
CAS Registry Number
 13638-82-9 CAPLUS

Chemical or Trade Name
 Pyrene, 1,3,6,8-tetra-2-naphthyl- (CA INDEX NAME)



CAS Registry Number
78211-97-3 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraphenyl-4-yl- (CA INDEX NAME)



L5 ANSWER 13 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2005103033 CAPLUS [Full Text](#)
Document Number
14938604

Title
Organic electroluminescent devices showing high luminescent efficiency and terphenyl derivatives therefor

Author/Inventor
Takagi, Kazuhiko, Kimura, Makoto, Hosokawa, Chishio, Funabashi, Masakazu
Patent Assignee/Corporate Source
Idemitsu Kosan Co. Ltd., Japan

Source
Jpn. Kohai Tokyko Koho, 22pp CODEN JOKXAF

Document Type
Patent

Language
Japanese

| Patent Information | | | | | |
|--------------------|------|----------|-----------------|----------|--|
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| JP 2004245106 | A | 20041005 | JP 2005-01233 | 20050322 | |

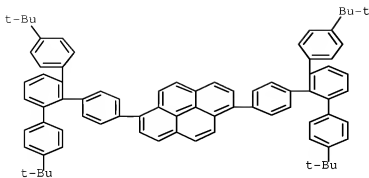
Abstract

Terphenyl deriv. I (X1 = C6-5o aromatic hydrocarbon or C5-5o aromatic heterocycle; R1-R3, A1, A2 = H, C6-5o aromatic hydrocarbonyl, C5-5o aromatic heterocycle, etc.; a, b = 1-8; m = 1-4; A1 and/or A2 = C1-6 alkyl, C3-10 cycloalkyl) and organic LED containing the same in one of their constituent organic layers are sep. claimed. Thus, 10 mmol 1,3-dichlorobenzene was reacted with n-BuLi at -78° in THF, 30 mmol 4-tert-butylphenyl(magnesium bromide), and then with 30 mmol 5-n-propoxy-4,8,5'-d-tert-butyl-1,3,2'-dioxadiazole to give a boronic acid derivative, 4 mmol of which was reacted with 8,16-diisopropylphenylboronic acid in the presence of Pd catalyst to give a white product of II in 20% yield. An organic LED containing II showed blue emission with luminescence half life >20,000 h.

Hit Structure

CAS Registry Number
91556-12-6 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-bis[4'-(1'-[1,1'-dimethyl-2-ethoxy]-4'-yl)-1,1'-dimethyl-2-ethoxy]phenyl-1,3,2'-bis[4'-[1,1'-bis(2'-ethoxy)-4'-yl]-1,1'-bis(2'-ethoxy)]phenyl-4-yl- (9C2) (CA INDEX NAME)



U.S. AND/OR 18 OF 59 CAPLUS: COPYRIGHT 2011 ACS on STN

Accession Number 2006-974990 CAPLUS File(s)

Document Number 149 356327

Title

Preparation of aromatic amine derivatives as doping materials for organic electroluminescent devices

Author(s)

Furushashi, Masakazu; Kubota, Mineyuki

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

PCT Int. Appl. Stpp. Chemical Indexing Equivalent to 150559445 (JP) CODEN: PIXXDZ

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----------------|------|-----------|------------------|----------|
| WO 200608080 | A1 | 20060921 | WO 2006-JP300516 | 20060117 |
| JP 4263799 | B2 | 200909513 | JP 2005-73474 | 20050315 |
| JP 2006256979 | A | 20060925 | | |
| EP 1850096 | A1 | 20071128 | EP 2006-711796 | 20060117 |
| KR 2007110962 | A | 20071116 | KR 2007-7020959 | 20070913 |
| IN 2007CN040353 | A | 20071123 | IN 2007-CN4053 | 20070917 |
| CN 101142169 | A | 20080312 | CN 2006-8000634 | 20070917 |

Abstract

The file comprises: [T1] = (A3)c, T2 = (A4)d, T3 = (A1)a, T4 = (A5)d, A1 - A4 = H, (un)substituted alkyl, (un)substituted aryl, etc., a, b, c, d = 0 - 3, A5 - A12 = (un)substituted alkyl, (un)substituted aryl, (un)substituted aralkyl, etc., or A5 and A6, A7 and A8, A9 and A10, A11 and A12 may be connected to form a ring, R1 - R10 = H, (un)substituted alkyl, (un)substituted aryl, etc.] are prepared. Thus, the title compound (I) was prepared from the coupling reaction of 6,12-dibromodiphenyl with bis(3,4-dimethylphenyl)amine. An organic electroluminescent device containing (I) showed blue light and luminous efficiency 7.1 cd/A under voltage of 6.5 V.

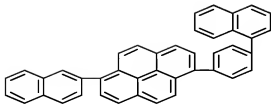
HR Structure

CAS Registry Number

870774-21-3 CAPLUS

Chemical or Trade Name

Pyrene, 2-(2-naphthalenyl)-6-(4-(12-naphthalenyl)phenyl)- (CA INDEX 30085)



06 CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

Accession Number

2006-08-4879 CAPLUS File No.

Document Number

149,302,432

Title

Material for light-emitting element and light-emitting element

Author/Inventor

Sugimoto, Kazumori, Murase, Seichiro, Kikuchi, Daisuke, Nagao, Kazumasa, Ogawa, Takaharu, Toriizawa, Tsuyoshi

Patent Assignee/Corporate Source

Toray Industries, Inc., Japan

Source

PCT Int. Appl., 77pp. CODEN: P60XDE

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | FIG. | DATE | APPLICATION NO. | DATE |
|-----------------|------|------------|------------------|------------|
| WO 2006/07722 | A1 | 2006/08/31 | WO 2006-JP363254 | 2006/02/23 |
| JP 2006255515 | A | 2006/08/05 | JP 2005-180464 | 2005/04/21 |
| EP 1850486 | A1 | 2007/11/07 | EP 2006-714394 | 2006/02/23 |
| KR 2007/14723 | A | 2007/12/04 | KR 2007-7019975 | 2007/02/24 |
| US 2009/0066249 | A1 | 2009/03/12 | US 2007-817143 | 2007/06/24 |
| US 7801784 | B2 | 2011/03/06 | | |
| CN 101128561 | A | 2008/02/20 | CN 2006-0006231 | 2007/08/27 |

Abstract

The invention relates to a material for a light-emitting device comprising a pyrene compound represented by a general formula I where R1 to R10 independently represent a specific functional group, provided that at least one of R1 to R10 represents a substituent represented by a general formula II where R11 to R14 independently represent a specific functional group, provided that any one of R11 to R14 is used for the single bonding to the pyrene backbone. X1 represents any one of the groups of -O-, -S-, -N(R15)-; Y1 to Y4 are independently selected from a nitrogen atom and a carbon atom, provided that at least one of Y1 to Y4 is a nitrogen atom and at least one of Y1 to Y4 is a carbon atom and, when it is a nitrogen atom, the nitrogen atom has no substituent attached. R15 represents a specific functional group. By using this material, a light-emitting device having higher light-emitting efficiency and excellent durability can be provided.

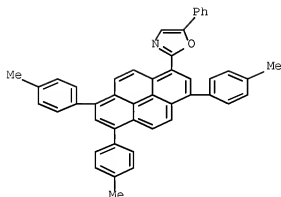
HE Structure

CAS Registry Number

908011-37-4 CAPLUS

Chemical or Trade Name

Benzoazole, 2-[3,6-bis(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)

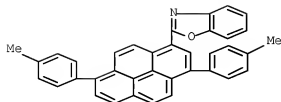


CAS Registry Number

908011-69-8 CAPLUS

Chemical or Trade Name

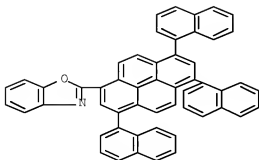
Benzoazole, 2-[3,6-bis(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



CAS Registry Number

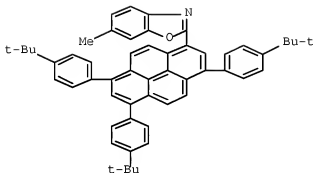
908011-10-1 CAPLUS

Chemical or Trade Name
 Benzoxazole, 2-(1,4,8-tri-1-naphthalenyl-1-pyrenyl)- (CA INDEX NAME)



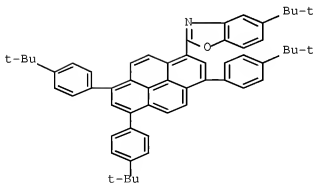
CAS Registry Number
 905011-14-5 CAS/US

Chemical or Trade Name
 Benzoxazole, 6-methyl-2-[3,6,8-tris(4-(1,1-dimethylethyl)phenyl)-1-pyrenyl]- (CA INDEX NAME)



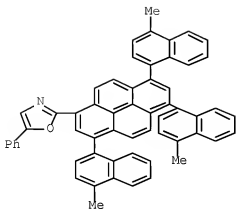
CAS Registry Number
 905011-75-6 CAS/US

Chemical or Trade Name
 Benzoxazole, 5-(1,1-dimethylethyl)-2-[3,6,8-tris(4-(1,1-dimethylethyl)phenyl)-1-pyrenyl]- (CA INDEX NAME)



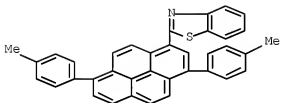
CAS Registry Number
 905011-38-5 CAS/US

Chemical or Trade Name
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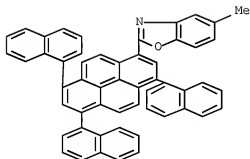
CAS Registry Number
908011-68-7 CFL105

Chemical or Trade Name
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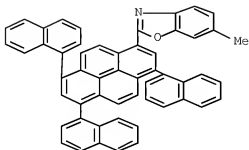
CAS Registry Number
908011-71-2 CFL108

Chemical or Trade Name
Benzo[ghi]perylene, 5-methyl-2-[3,6,8-tri-1-naphthalenyl-1-pyrenyl]- (CA INDEX NAME)



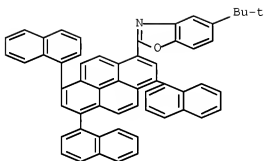
CAS Registry Number
908011-72-3 CFL109

Chemical or Trade Name
Benzo[ghi]perylene, 6-methyl-2-[3,6,8-tri-1-naphthalenyl-1-pyrenyl]- (CA INDEX NAME)



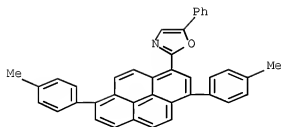
CAS Registry Number
908011-73-4 (CAI)1/3

Chemical or Trade Name
Benzoacridine, 5-[1,1-dimethyl-2-ethyl-2-(3,6,8-tri-1-naphthylenyl)-1-pyrenyl]-
(CA INDEX NAME)



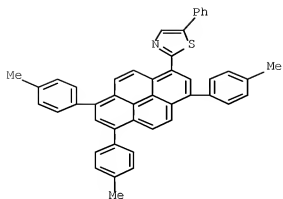
CAS Registry Number
908011-61-0 (CAI)1/3

Chemical or Trade Name
Quinoxaline, 2-(3,8-bis(4-methylphenyl)-1-pyrenyl)-5-phenyl- (CA INDEX NAME)



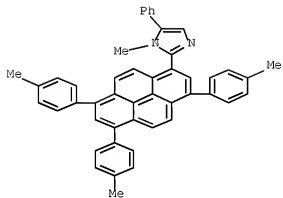
CAS Registry Number
908011-62-1 (CAI)1/3

Chemical or Trade Name
Thiazole, 5-phenyl-2-(3,6,8-tris(4-methylphenyl)-1-pyrenyl)- (CA INDEX NAME)



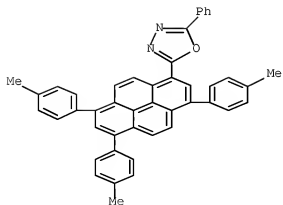
CAS Registry Number
90821-43-2 CNF155

Chemical or Trade Name
1H-Thiadiazole, 5-phenyl-2-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]-
(CA INDEX NAME)



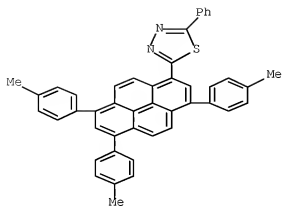
CAS Registry Number
90821-64-3 CNF173

Chemical or Trade Name
1,3,4-Oxadiazole, 2-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]-
(CA INDEX NAME)



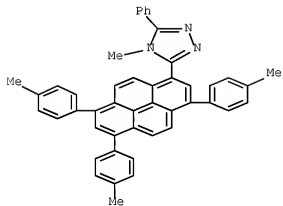
CAS Registry Number
90031-65-9 CAPLOS

Chemical or Trade Name
1,7,4-Thiadiazole, 2-phenyl-5-(3,6,8-tris(4-methylphenyl)-1-pyrenyl)- (CA INDEX NAME)



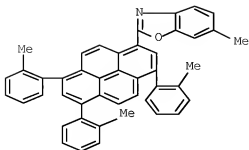
CAS Registry Number
90031-66-5 CAPLOS

Chemical or Trade Name
4H-1,2,4-Triazole, 4-methyl-3-phenyl-5-(3,6,8-tris(4-methylphenyl)-1-pyrenyl)- (CA INDEX NAME)



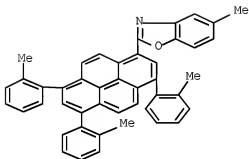
CAS Registry Number
90031-76-7 CAPLOS

Chemical or Trade Name
Benzoxazole, 6-methyl-2-(3,6,8-tris(4-methylphenyl)-1-pyrenyl)- (CA INDEX NAME)



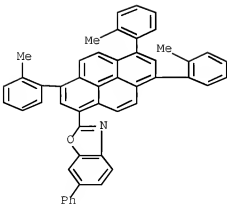
CAS Registry Number
90821-77-0 CML05

Chemical or Trade Name
Benzo[a]acele, 5-methyl-2-[3,6,8-tris(2-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



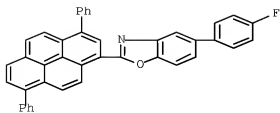
CAS Registry Number
90821-78-9 CML05

Chemical or Trade Name
Benzo[a]acele, 6-phenyl-2-[3,6,8-tris(2-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



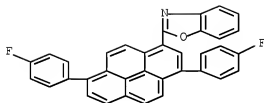
CAS Registry Number
90821-79-0 CML05

Chemical or Trade Name
Benzo[a]acele, 2-(1,3,5-diphenyl-1-pyrenyl)-5-(4-fluorophenyl)- (CA INDEX NAME)



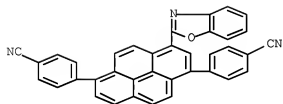
CAS Registry Number
940211-33-4 CAPLOS

Chemical or Trade Name
Benzoazazole, 2-[3,5-bis(4-phenylphenyl)-1-pyrenyl]- (CA INDEX NAME)



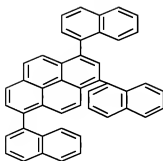
CAS Registry Number
940211-83-6 CAPLOS

Chemical or Trade Name
Benzonitrile, 4,4'-[3-(2-benzoxazolyl)-1,6-pyrenediyl]bis- (9CI) (CA INDEX NAME)



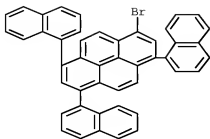
CAS Registry Number
940211-90-5 CAPLOS

Chemical or Trade Name
Pyrene, 1,3,6-tris(1-naphthalenyl)- (CA INDEX NAME)



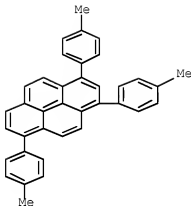
CAS Registry Number
940211-91-6 CAPLOS

Chemical or Trade Name
Pyrene, 1-bromo-3,6,8-tri-1-naphthalenyl- (CA INDEX NAME)



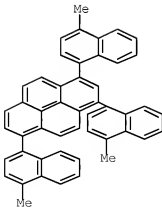
CAS Registry Number
90021-84-7 CAPIUS

Chemical or Trade Name
Pyrene, 1,3,6-tris(4-methylphenyl)- (CA INDEX NAME)



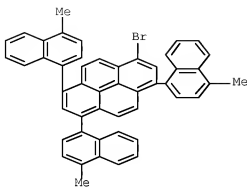
CAS Registry Number
90021-85-0 CAPIUS

Chemical or Trade Name
Pyrene, 1,3,6-tris(4-methyl-1-naphthalenyl)- (CA INDEX NAME)



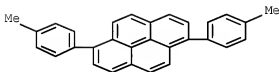
CAS Registry Number
90021-86-9 CAPIUS

Chemical or Trade Name
 Pyrene, 1-benzo-3,6,8-tris(4-methyl-1-naphthalenyl)- (CA INDEX NAME)



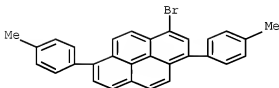
CAS Registry Number
 908031-95-0 CAPLUS

Chemical or Trade Name
 Pyrene, 1,6-bis(4-methylphenyl)- (CA INDEX NAME)



CAS Registry Number
 908031-95-1 CAPLUS

Chemical or Trade Name
 Pyrene, 3-benzo-1,6-bis(4-methylphenyl)- (CA INDEX NAME)



CG CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
 (7 CITINGS)

LS ANSWER 18 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
 2006 96609 CAPLUS Fulltext

Document Number
 148,87968

Title
 Organic electroluminescent device
 Author/Inventor
 Kawamura, Hisayuki Kubota, Mineyuki

Patent Assignee/Corporate Source
 Idemitsu Kosan Co., Ltd., Japan

Source
 PCT Int. Appl., 70 pp. CODIN: RXDXD2

Document Type
 Patent

Language
 Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|-----------------|----------|
| WO 2004042078 | A1 | 20040615 | WO 2005-092234 | 20051204 |
| US 20070134511 | A1 | 20070614 | US 2005-296400 | 20051208 |

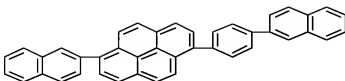
Abstract

Disclosed is an organic electroluminescent device comprising at least a pair of electrodes and a light-emitting layer interposed between them. This organic electroluminescent device is characterized in that the light-emitting layer contains a derivative which includes an asym. substituted anthracene as a partial structure and an amine derivative represented by the formula 1, where Ar1-Ar4 resp. represent a substituted or unsubstituted aromatic ring having 6-10 nuclear carbon atoms, R1 and R2 represent substituents which may be the same as or different from each other, or they may combine together to form a substituted or unsub. ring, and p represents an integer of 1-6.

HE Structure

CAS Registry Number
888705-94-0 CAPLUS

Chemical or Trade Name
Pyrene, 1-(2-naphthalenyl)-6-[4-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



05 CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(5 CITINGS)

LS ANSWER 18 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2006 838665 CAPLUS Fulltext

Document Number
14837410

Title
Organic electroluminescent device

Author/Inventor
Kawamura, Hisayuki, Kubota, Mineyuki, Furusho, Masakazu

Patent Assignee/Corporate Source
Idemitsu Kosan Co., Ltd., Japan

Source
PCT Int. Appl. 67 pp. CODEN: P00X02

Document Type
Patent

Language
Japanese
Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|------------------|----------|
| WO 2004059512 | A1 | 20040608 | WO 2005-092146 | 20051122 |
| JP 4653469 | B2 | 20110316 | JP 2004-348475 | 20041201 |
| JP 2006156888 | A | 20060815 | | |
| CN 101049299 | A | 20071107 | CN 2005-60641191 | 20051122 |
| CN 100569664 | C | 20091202 | | |
| KR 2007091280 | A | 20070910 | KR 2007-7012254 | 20070531 |

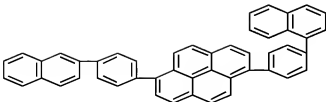
Abstract

Disclosed is an organic electroluminescent device comprising at least an anode, a cathode and an organic light-emitting layer interposed between the electrodes, wherein the organic light-emitting layer contains one or more host materials, a hole-trapping dopant and an electron-trapping dopant. By having the hole-trapping dopant and the electron-trapping dopant coexist in the organic light-emitting layer, the organic electroluminescent device can have a longer life.

HE Structure

CAS Registry Number
870774-37-7 CAPLUS

Chemical or Trade Name
Pyrene, 1-(4-[2-(2-naphthalenyl)phenyl]-6-[4-(2-naphthalenyl)phenyl])-(CA INDEX NAME)



05 CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(5 CITINGS)

LS ANSWER 20 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2006310707 CAPLUS Fulltext

Document Number
14817894

Title
Pyrene compound and light emitting transistor device utilizing the same for electroluminescent display

Author/Inventor
Oyamada, Takahito, Uchiuzou, Hiroyuki, Adachi, Chihaya, Akizawa, Seiji, Takahashi, Takayoshi

Patent Assignee/Corporate Source
Kyoto University, Japan; Nippon Telegraph and Telephone Corporation, Pioneer Corporation, Hitachi, Ltd., Mitsubishi Chemical Corporation, Rohm Co., Ltd.

Source
PCT Int. Appl. 47 pp. CODEN: P00X02

Document Type
Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|-----------|------------------|----------|
| WO 2004057326 | A1 | 200406401 | WO 2005-292164 | 20051125 |
| JP 2004174491 | A | 20040704 | JP 2005-257934 | 20050904 |
| EP 1814114 | A1 | 20070808 | EP 2005-899746 | 20051125 |
| CN 101080376 | A | 20071128 | CN 2005-80040407 | 20051125 |
| KR 2007095900 | A | 20070928 | KR 2007-704327 | 20070622 |
| US 20080108865 | A1 | 20080908 | US 2007-791674 | 20070806 |

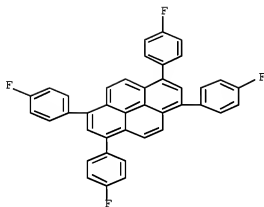
Abstract

A pyrene compound that when used in a light emitting transistor device, excels in both the properties of light emission and mobility, and a light emitting transistor device utilizing such a specified pyrene compound. As a main constituent of a luminescent layer of light emitting transistor device, use is made of a pyrene compound of the chemical formula 1 (R1 = haloalkyl, aryl (excluding Ph), C1-C6-alkyl, alkenyl, alkynyl, silyl, halo).

HR Structure

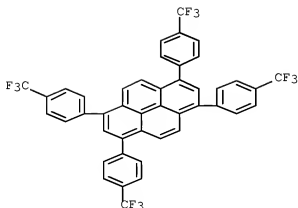
CAS Registry Number
835870-24-5 CAS109

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraakis[4-fluorophenyl]- (CA INDEX NAME)



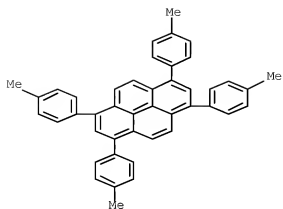
CAS Registry Number
881853-23-2 CAS109

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraakis[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)



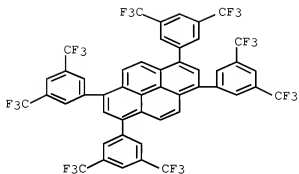
CAS Registry Number
887929-11-9 CAS109

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraakis[4-methylphenyl]- (CA INDEX NAME)



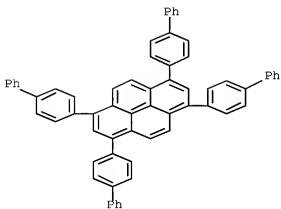
CAS Registry Number
887928-13-1 CASLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetrakis[3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)



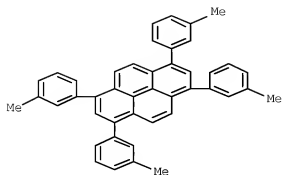
CAS Registry Number
78213-91-3 CASLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetrakis[1,1'-biphenyl]-4-yl- (CA INDEX NAME)



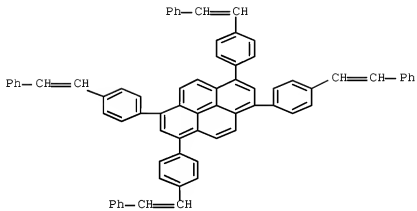
CAS Registry Number
970133-11-4 CASLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetrakis[3-methylphenyl]- (CA INDEX NAME)



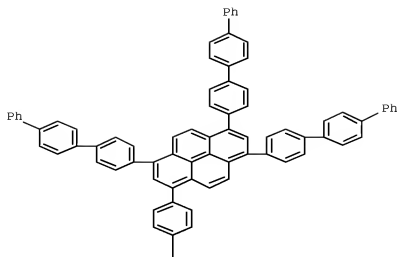
CAS Registry Number
887909-55-9 CAS#

Chemical or Trade Name
Pyrene, 1,3,6,8-tetrakis[4-(2-phenylethenyl)phenyl]- (CA INDEX NAME)



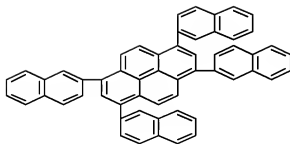
CAS Registry Number
887909-57-1 CAS#

Chemical or Trade Name
Pyrene, 2,3,6,8-tetrakis[1,1'4',2''-terphenyl]-6-yl)- (9CI) (CA INDEX NAME)



CAS Registry Number
887909-59-3 CASLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetra-2-naphthalenyl- (CA INDEX NAME)



CS CITING REF COUNT: 4 THERE ARE 4 CASLUS RECORDS THAT CITE THIS RECORD
(9 CITINGS)

Accession Number 2006010608 CAPLUS File No.

Document Number 145.17891

Title

Pyrene compound and, utilizing the same, light emitting transistor device and electroluminescence device

Author/Inventor

Oyamada, Takahito, Uchiyama, Hiroyuki, Adachi, Chikaya, Akizawa, Seiji, Takahashi, Takayoshi

Patent Assignee/Corporate Source

Kyoto University, Japan; Nippon Telegraph and Telephone Corporation, Pioneer Corporation, Hitachi, Ltd., Mitsubishi Chemical Corporation, Rohm Co., Ltd.

Source

PCT Int. Appl., 66 pp. CODEN: POKX22

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KGID | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|------------------|----------|
| WO 2004097325 | AL | 20040601 | WO 2005-0921667 | 20051125 |
| JP 2004174494 | A | 20040706 | JP 2005-282590 | 20050928 |
| EP 181322 | AL | 20070915 | EP 2005-409745 | 20051125 |
| CN 10172743 | A | 20071114 | CN 2005-60040399 | 20051125 |
| KR 2007093401 | A | 20070916 | KR 2007-7014396 | 20070622 |
| US 20080012475 | A1 | 20080117 | US 2007-791613 | 20070806 |

Abstract

An organic phosphor of the following formula (R1 = heteroaryl, aryl, C1-20-alkyl, cycloalkyl, alkynyl, etc.; R2 = heteroalkyl, aryl, C1-20-alkyl, cycloalkyl, alkynyl, etc.; R1 = R2) that can be used in both a light emitting transistor device and an organic EL device. There is provided a light emitting transistor device or an organic EL device, wherein luminescence of such a specified aryl pyrene compound is utilized in a light emitting layer of transistor device or a luminescent layer, hole transporting layer or electron transporting layer of organic electroluminescence device.

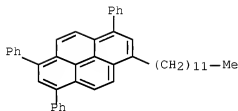
Hit Structure

CAS Registry Number

887917-92-2 CAPLUS

Chemical or Trade Name

Pyrene, 1-dodecyl-3,6,8-triphenyl- (CA INDEX NAME)

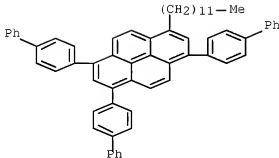


CAS Registry Number

887917-94-4 CAPLUS

Chemical or Trade Name

Pyrene, 1,3,6-trisubstituted-1,1'-biphenyl-4-yl-8-dodecyl- (CA INDEX NAME)

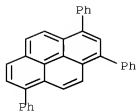


CAS Registry Number

887918-05-3 CAPLUS

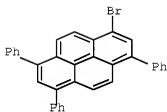
Chemical or Trade Name

Pyrene, 1,3,6-triphenyl- (CA INDEX NAME)



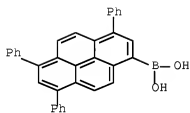
CAS Registry Number
887928-97-2 CAS#108

Chemical or Trade Name
Pyrene, 1-benzo-3,6,8-triphenyl- (CA INDEX NAME)



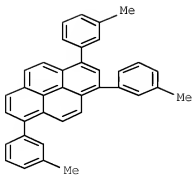
CAS Registry Number
887928-26-5 CAS#109

Chemical or Trade Name
Boronic Acid, 8-[3,6,8-triphenyl-1-pyrenyl]- (CA INDEX NAME)



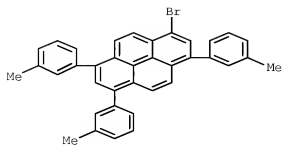
CAS Registry Number
887928-26-5 CAS#109

Chemical or Trade Name
Pyrene, 1,3,6-tris(3-methylphenyl)- (CA INDEX NAME)



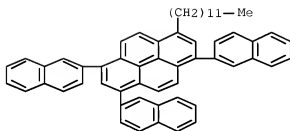
CAS Registry Number
887928-30-1 CAS#110

Chemical or Trade Name
 Pyrene, 1-(4-methyl-3-methylphenyl)- (CA INDEX NAME)



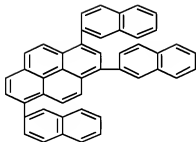
CAS Registry Number
 887911-90-5 (CAILOS)

Chemical or Trade Name
 Pyrene, 1-(dodecyl)-1,6,8-tri-2-naphthalenyl- (CA INDEX NAME)



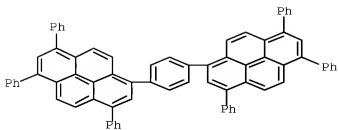
CAS Registry Number
 887918-03-5 (CAILOS)

Chemical or Trade Name
 Pyrene, 1,3,6-tri-2-naphthalenyl- (CA INDEX NAME)



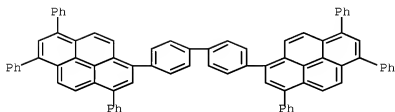
CAS Registry Number
 887918-00-4 (CAILOS)

Chemical or Trade Name
 Pyrene, 1,3,6-triphenyl-9-[4-(3,6,8-triphenyl-1-pyrenyl)phenyl]- (CA INDEX NAME)



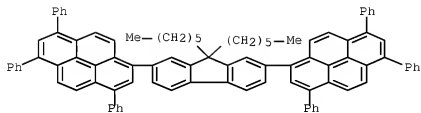
CAS Registry Number
887928-32-9 CAPILOS

Chemical or Trade Name
Pyrene, 1,1'-(3,3'-biphenyl)-4,4'-diylbis[3,6,8-triphenyl]- (9CI) (CA INDEX NAME)



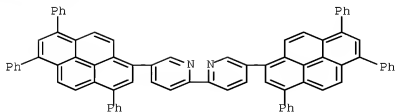
CAS Registry Number
887928-26-3 CAPILOS

Chemical or Trade Name
Pyrene, 1,1'-(9,9'-dihexyl)-98-fluorene-2,7-diylbis[3,6,8-triphenyl]- (CA INDEX NAME)



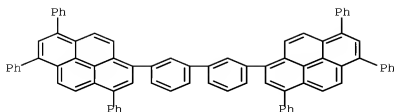
CAS Registry Number
887928-33-0 CAPILOS

Chemical or Trade Name
2,2'-dipyridine, 5,5'-bis[3,6,8-triphenyl-1-pyrenyl]- (CA INDEX NAME)



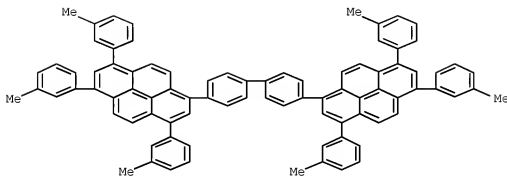
CAS Registry Number
887928-23-2 CAPILOS

Chemical or Trade Name
Pyrene, 1,1'-(3,3'-biphenyl)-3,3'-diylbis[3,6,8-triphenyl]- (9CI) (CA INDEX NAME)



CAS Registry Number
81722-12-3 CASUS

Chemical or Trade Name
Eryose, 1,3,5-tris(phenyl)-4,4'-diylbis[3,6,8-tris(3-methylphenyl)-
(SCI) (CA INDEX NAME)



05 CITING REF COUNT: 4 THERE ARE 4 CASUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

L3 ANSWER 22 OF 59 CASUS COPYRIGHT 2011 ACS on STN

Accession Number
2008343108 CASUS FileID

Document Number
144391623

Title
Electronic devices containing organic semiconductors with low halogen content

Author/Inventor
Spreitzer, Hubert; Falou, Aurelie; Scheurich, Rene; Schulte, Niels; Buesing, Anne; Stoussel, Philipp
Patent Assignee/Corporate Source
Maxx Patent GmbH, Germany

Source
PCT Int. Appl. 31 pp CODEN PIXXD2

Document Type
Patent

Language
German

Patent Information

| PATENT NO | KIND | DATE | APPLICATION NO | DATE |
|----------------|------|----------|----------------|----------|
| WO 2006037456 | A1 | 20060413 | WO 2005-021012 | 20050920 |
| EP 1794219 | A1 | 20070413 | EP 2005-784377 | 20050920 |
| JP 2009516421 | T | 20090515 | JP 2007-533903 | 20050920 |
| US 20080113468 | A1 | 20080515 | US 2007-664473 | 20070330 |

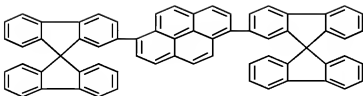
Abstract

The invention relates to electronic devices containing organic semiconductors with a halogen content < 20 ppm. As a result, the service life and efficiency of the corresponding electronic devices is increased, and such materials are more suitable for use in organic electronic devices than materials having higher halogen content. In low embodiment, low mol. weight organic or polymeric semiconductors are obtained by coupling reactions involving reactive halogens, followed by optional isolation of the semiconductors, and treatment with a reducing agent until the halogen content is < 20 ppm.

Hi Structure

CAS Registry Number
73285-22-1 CASUS

Chemical or Trade Name
9,9'-Spiro[9(10-fluorene), 2,2'-(1,6-pyrenediyl)]bis- (CA INDEX NAME)



CR CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITING)

L5 ANSWER 23 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2006 13624 CAPLUS [Eu4-text](#)

Document Number
446447408144.117443
Title

Organic electroluminescent devices

Author/Inventor

Vestweber, Horst; Stoessel, Philipp; Gerhard, Anja; Parham, Amir

Parent Assigns Corporate Secured
Cover: Drexel Burnham Lambert

Source

PCT Int. Appl., 36 pp. CODEN: POCO22

Document Type

Patent

Language

German
Patent Information

| PATENT NO | KIND | DATE | APPLICATION NO. | DATE |
|-----------------|------|----------|----------------------|----------|
| WO 2004003388 | A1 | 20060105 | WO 2005-EP6727 | 20050622 |
| DE 102004031000 | | 20060112 | DE 2004-102004031000 | 20040626 |
| EP 1761962 | A1 | 20070314 | EP 2005-753649 | 20050622 |
| EP 1761962 | Bi | 20100203 | | |
| JP 2004504381 | T | 20080214 | JP 2007-517189 | 20050622 |
| AT 4570985 | T | 20100215 | AT 2005-753649 | 20050622 |
| US 20090158874 | A1 | 20090625 | US 2007-063067 | 20070130 |

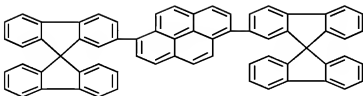
Abstract

Organic electroluminescent devices comprising a cathode, an anode, and 2 emitting layer are described in which the emitting layer comprises a host material 1-99.9 weight % and 0.1-99.9 weight % of a compound described by the general formula $Ar-X-CR_1(R_2)C(R_3)C(R_4)N(R_5)P(R_6)As(R_7)Sb(R_8)Se(R_9)$ or $Sb(R_9)X$ at each occurrence independently selected optionally substituted C-60 bis(aryl) (hetero)aryls, Y = at each occurrence independently selected optionally substituted C-60 monovalent (hetero)aryls, with the restriction that Y does not incorporate any (un)substituted amino groups, Z = independently selected at each occurrence independently selected optionally substituted C-60 monovalent (hetero)aryls, with the restriction that Z does not incorporate any (un)substituted amino groups, Z = independently selected at each occurrence independently selected optionally substituted C-40 alkyl groups, C-60 alkyl groups, C-60 branched, or cyclic optionally substituted C-40 alkyl groups. Compounds are also claimed in which the Y and Z groups are joined by a covalent bond or by a bivalent bridging group having up to 5 bridging atoms.

HF Structure

CAS Registry Number
723285-22-1 CAP10G

Chemical or Trade Name
9,9'-spirobi[9H-fluorene], 2,2'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



08 CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

L5 ANSWER 24 OF 59 CAPLUS COPYRIGHT 2011 ACS on BTN

Accession Number
0801400875 CADUC B. 2004

Document Number

14469531

Title

Process for preparation of fluorene derivatives as organic electroluminescent devices

Author/Inventor
H. A. Pitt

No. Mitsunori, Yamamoto, Hiroshi, Hachiya, Satoshi, Kawamura, Hisayuki
 Student, Aomori University, Aomori

Patent Assignee/Corporate Source
Idemitsu Kosan Co., Ltd., Japan

Source: Kaimitsu Kosen Co., Ltd., Japan.

PCT Int

Document Type

Patent

| PATENT NO | KIND | DATE | APPLICATION NO | DATE |
|-----------|------|------|----------------|------|
|-----------|------|------|----------------|------|

| | | | | |
|----------------|----|----------|------------------|----------|
| WO 2005123434 | AI | 20051229 | WO 2005-399024 | 20050518 |
| CN 184235.0 | A | 20041004 | CN 2005-80001007 | 20050518 |
| EP 1780191 | AI | 20070502 | EP 2005-741059 | 20050518 |
| US 20040159956 | AI | 20040720 | US 2005-282640 | 20051121 |
| US 7683205 | B2 | 20100323 | | |
| KR 2007028284 | A | 20070312 | KR 2006-7006217 | 20060330 |
| IN 2006CH01079 | A | 20070817 | IN 2006-CN0679 | 20060330 |
| US 20060303433 | AI | 20061211 | US 2006-178007 | 20060724 |
| US 7781628 | B2 | 20100824 | | |
| US 20100277063 | AI | 20101104 | US 2010-033839 | 20100719 |

Abstract

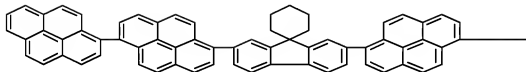
This invention pertains to a method for producing fluorene derivs. with general formula of (A-Xip-FL-Sim-Y-Cin (wherein p = 0-10, n = 0-10, pen > 1 m = 1-10, X and Y = independently a bond, (un)substituted aryl, alkylene, or alkenylene; A and C = independently (un)substituted aryl, heteroaryl, etc.; B = a bond, (un)substituted aryl, alkylene, or alkenylene; FL = (un)substituted fluorene). For example, the compound I was prepared in a multi-step synthesis starting from 1-acylpyrene and 4-bromophenylboronic acid. Also disclosed is an organic electroluminescent device having high luminescent efficiency wherein an organic thin film layer composed of one or more layers including at least a light-emitting layer is interposed between a cathode and an anode.

Hit Structure

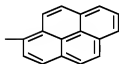
CAS Registry Number
870350-45-3 CAPLUS

Chemical or Trade Name
Spiro[pyrene-1,9'-[10]fluorene], 2',7'-bis[([1,2'-bipyren]-6-yl)-
(9C)] (CA INDEX NUMBER)

PAGE 1-A



PAGE 1-B



08 CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)

15 ANSWER 28 OF 59 CAPLUS, COPYRIGHT 2011 ACS on STN

Accession Number
20051202773 CAPLUS Full-text

Document Number
144.42963

Title
Asymmetric pyrene derivative and organic electroluminescent device using same to improve luminous efficiency and long life

Author/Inventor
Kabata, Mireyuki, Funahashi, Masakazu, Hosokawa, Oshio

Patent Assignee/Corporate Source
Mitsubishi Kasei Co., Ltd., Japan

Source
PCT Int. Appl., 48 pp. CODEN: PBOXD2

Document Type
Patent

Language
Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|-----------|------------------|----------|
| WO 2005115950 | A1 | 200512108 | WO 2005-394494 | 20050510 |
| EP 1749809 | A1 | 200702017 | EP 2005-739161 | 20050510 |
| CH 1360397 | A | 20070509 | CH 2005-80617149 | 20050510 |
| US 20060134127 | A1 | 20060713 | US 2005-282592 | 20051121 |
| US 7783761 | B2 | 20100727 | | |
| KR 2007029717 | A | 20070814 | KR 2006-702493 | 20061127 |
| IN 2006C046355 | A | 20070829 | IN 2006-C046355 | 20061127 |
| US 20100308718 | A1 | 20101209 | US 2010-795216 | 20100607 |
| JP 2011066446 | A | 20110331 | JP 2010-277967 | 20101214 |

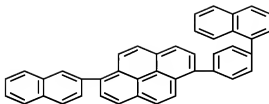
Abstract

Disclosed are asym. pyrene derivs. having substituents (Link)/m and (L)/nAr¹ (Ar, Ar' = C6-50-aromatic group, L, L' = phenylene, naphthalenylene, fluorenylene, dibenzosiloleylene; m = 0-2; n = 1-4; s = 0-2; t = 0-4). An organic electroluminescent device comprising an organic thin film layer which is interposed between an anode and a cathode and composed of one or more layers including at least a light-emitting layer is also disclosed wherein the organic thin film layer contains at least one of the asym. pyrene derivs. by itself or as a component of a mixture. Such an organic electroluminescent device has high luminous efficiency and long life due to the asym. pyrene derivative.

HR Structure

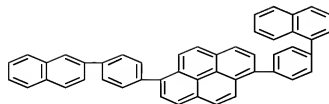
CAS Registry Number
870714-21-3 CAPLUS

Chemical or Trade Name
Pyrene, 1-(2-naphthalenyl)-6-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



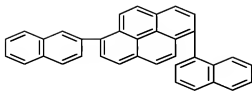
CAS Registry Number
870714-23-7 CAPLUS

Chemical or Trade Name
Pyrene, 1-(6-[2-naphthalenyl]phenyl)-6-[6-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



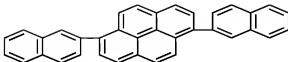
CAS Registry Number
870714-18-6 CAPLUS

Chemical or Trade Name
Pyrene, 2-(1-naphthalenyl)-6-(2-naphthalenyl)- (CA INDEX NAME)



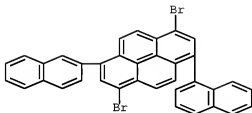
CAS Registry Number
66354-20-7 CFL105

Chemical or Trade Name
Pyrene, 1,6-di-2-naphthalenyl- (CA INDEX NAME)



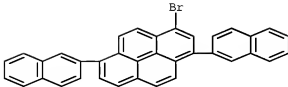
CAS Registry Number
870774-32-6 CFL105

Chemical or Trade Name
Pyrene, 1,6-di-bromo-3-[(1-naphthalenyl)-1-(2-naphthalenyl)- (CA INDEX NAME)



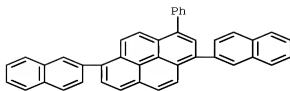
CAS Registry Number
870774-33-7 CFL105

Chemical or Trade Name
Pyrene, 3-bromo-1,6-di-2-naphthalenyl- (CA INDEX NAME)



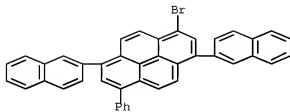
CAS Registry Number
870774-34-0 CFL105

Chemical or Trade Name
Pyrene, 1,6-di-2-naphthalenyl-3-phenyl- (CA INDEX NAME)



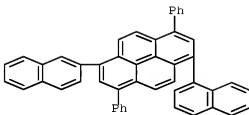
CAS Registry Number
870774-35-9 CAPLUS

Chemical or Trade Name
Pyrene, 1-benzo-3,8-di-2-naphthalenyl-6-phenyl- (CA INDEX NAME)



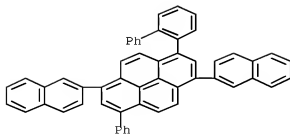
CAS Registry Number
870774-23-5 CAPLUS

Chemical or Trade Name
Pyrene, 1-(1-naphthalenyl)-6-(2-naphthalenyl)-3,8-diphenyl- (CA INDEX NAME)



CAS Registry Number
870774-24-6 CAPLUS

Chemical or Trade Name
Pyrene, 2-(1,1'-biphenyl)-2-yl-3,8-di-2-naphthalenyl-6-phenyl- (CA INDEX NAME)



CITING REF COUNT: 0 THERE ARE 0 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

143 459885

Title Process for preparation of 1,6-dihalopyrene derivatives

Author/Inventor

Furushichi Masakazu

Patent Assignee/Corporate Source

Kumisu Kasei Co., Ltd., Japan

Source

PCT Int. Appl., 34 pp. CODEN: P6XKD2

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | CLASS | DATE | APPLICATION NO. | DATE |
|----------------|-------|----------|------------------|-----------|
| WO 2005/08335 | A1 | 20051117 | WO 2004-281403 | 200409917 |
| EP 1744080 | A1 | 20070124 | EP 2004-773400 | 200409917 |
| CN 1953951 | A | 20070425 | CN 2004-80042997 | 200409917 |
| US 2008015999 | A1 | 20080117 | US 2006-568578 | 20061102 |
| KR 2007011460 | A | 20070124 | KR 2006-7029411 | 20061108 |
| IN 2006CN04133 | A | 20070615 | IN 2006-CN4133 | 20061110 |

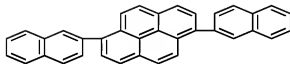
Abstract

This invention pertains to a method for producing 1,6-disubstituted 3,8-dihalopyrene derivatives represented by the following general formula I (wherein R1 and R2 = independently (unsubstituted) alkyl, aryl, aralkyl, cycloalkyl, alkoxy, arylalkoxy, halo, cyano, or silyl, and X = halo). For example, 1,6-dibromopyrene was reacted with isopropylmagnesium bromide in 1,4-dioxane in the presence of dihydrodi(phenylphosphino)ferrocene/palladium to give 1,6-diisopropylpyrene (31%). 1,6-Diisopropylpyrene was then treated with HBr in DMF to afford 1,6-dibromo-3,8-diisopropylpyrene (23%). It is useful as an intermediate for dyes, etc., especially as an intermediate for a charge-transporting material for electrophotoreceptors, material for organic electroluminescent elements, and hole-transporting material or luminescent material for organic electroluminescent elements.

Hit Structure

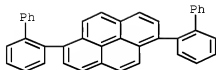
CAS Registry Number
66354-20-7 CAS108

Chemical or Trade Name
Pyrene, 1,6-di-2-naphthalenyl- (CA INDEX NAME)



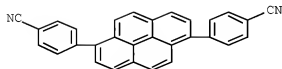
CAS Registry Number
869340-20-3 CAS108

Chemical or Trade Name
Pyrene, 1,6-bis[1,3,5-triphenyl]-2-yl- (CA INDEX NAME)



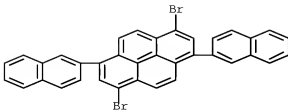
CAS Registry Number
869340-20-3 CAS108

Chemical or Trade Name
Benzonitrile, 4,4'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



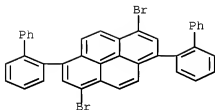
CAS Registry Number
869340-20-3 CAS108

Chemical or Trade Name
Pyrene, 1,6-dibromo-3,8-di-2-naphthalenyl- (CA INDEX NAME)



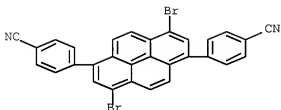
CAS Registry Number
843346-32-6 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-bis(4-phenyl)-2-yl)-3,8-dibromo- (CA INDEX NAME)



CAS Registry Number
869340-06-7 CAPLOS

Chemical or Trade Name
Benzoin(1,6-bis(4-phenyl)-3,8-dibromo-1,6-pyrenediyl)bis- (CA INDEX NAME)



ON CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)

15 ANSWER 27 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2005120376 CAPLUS 541861

Document Number
143 485599

Title

Aromatic amine derivative, organic electroluminescent element employing the same, and process for producing aromatic amine derivative

Author/Inventor

Furushishi, Masakazu

Patent Assignee/Corporate Source

Idemitsu Kasei Co., Ltd., Japan

Source

PCT Int. Appl. 87 pp. CODEN P0CXD2

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KNOW | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|------------------|----------|
| WO 2005109366 | A1 | 20051117 | WO 2004-391402 | 20040917 |
| EP 1746085 | A1 | 20070124 | EP 2004-773404 | 20040917 |
| CN 1953960 | A | 20070425 | CN 2004-80042994 | 20040917 |
| JP 4184401 | B2 | 20081126 | JP 2006-512914 | 20040917 |
| KR 2007011484 | A | 20070124 | KR 2006-7023676 | 20061110 |
| IN 2006CN04140 | A | 20070615 | IN 2006-CN4140 | 20061110 |
| US 20070252911 | A1 | 20071101 | US 2006-096299 | 20061113 |

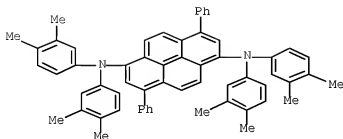
Abstract

An aromatic amine derivative having a specific structure comprising a substituted pyrene structure and a substituted diphenylamino group bonded thereto, an organic electroluminescent element comprising a cathode, an anode and an organic thin film sandwiched therebetween which is composed of one or more layers comprising a luminescent layer, wherein at least one layer of the organic thin film layer consists of the aromatic amine derivative alone or contains the derivative as a component of a mixture, and a process for producing the aromatic amine derivative. The organic electroluminescent element has a long life and a high luminescent efficiency and emits a blue color. The aromatic amine derivative realizes the element.

HN Structure

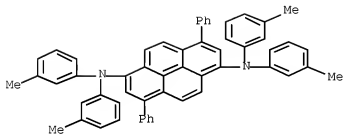
CAS Registry Number
764517-37-6 CASLUS

Chemical or Trade Name
1,6-bispyrenediamine, N1,N1,N6,N6-tetrakis(3,4-dimethylphenyl)-3,9-diphenyl-
(CA INDEX NAME)



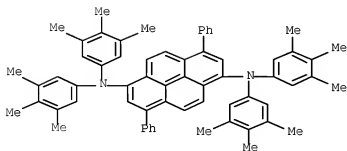
CAS Registry Number
869496-33-3 CASLUS

Chemical or Trade Name
1,6-bispyrenediamine, N1,N1,N6,N6-tetrakis(3-methylphenyl)-3,9-diphenyl-
(CA INDEX NAME)



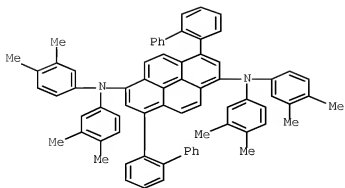
CAS Registry Number
869496-84-4 CASLUS

Chemical or Trade Name
1,6-bispyrenediamine, 3,9-bis(4-methylphenyl)-N1,N1,N6,N6-tetrakis(3,4,5-trimethylphenyl)-
(CA INDEX NAME)



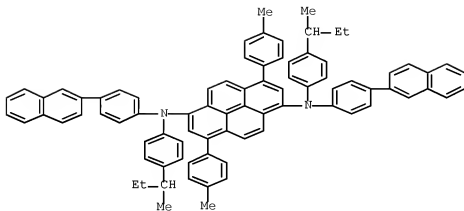
CAS Registry Number
869496-89-9 CASLUS

Chemical or Trade Name
1,6-bispyrenediamine, 3,9-bis(2-naphthalenyl)-N1,N1,N6,N6-tetrakis(3,4,5-trimethylphenyl)-
(CA INDEX NAME)



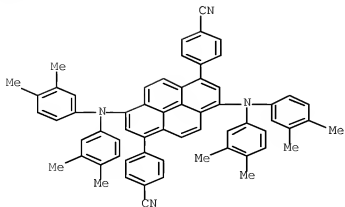
CAS Registry Number
869496-87-7 (CFL105)

Chemical or Trade Name
1,4-bis[3,6-bis(4-methylphenyl)pyridin-2-yl]-2,6-bis[4-(2-naphthyl)phenyl]pyrene (CA INDEX NAME)



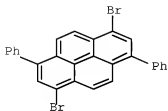
CAS Registry Number
869496-88-8 (CFL105)

Chemical or Trade Name
Benzoisothiazole, 4,4'-(3,6-bis[3,4-dimethylphenyl]amino)-2,6-pyrenediylbis- (PCI) (CA INDEX NAME)



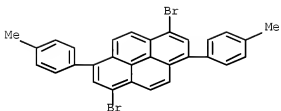
CAS Registry Number
76851-28-5 CAPLIS

Chemical or Trade Name
Pyrene, 1,6-dibromo-3,8-diphenyl- (CA INDEX NAME)



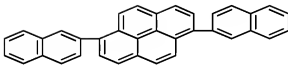
CAS Registry Number
869496-93-5 CAPLIS

Chemical or Trade Name
Pyrene, 1,6-dibromo-3,8-bis(4-methylphenyl)- (CA INDEX NAME)



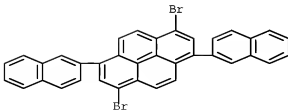
CAS Registry Number
663954-28-7 CAPLIS

Chemical or Trade Name
Pyrene, 1,6-di-2-naphthalenyl- (CA INDEX NAME)



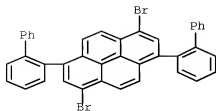
CAS Registry Number
869340-04-5 CAPLIS

Chemical or Trade Name
Pyrene, 1,6-dibromo-3,8-di-2-naphthalenyl- (CA INDEX NAME)



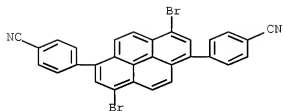
CAS Registry Number
869340-05-6 CAPLIS

Chemical or Trade Name
Pyrene, 1,6-bis[1,2,3'-biphenyl]-2-yl]-3,8-dibromo- (CA INDEX NAME)



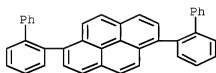
CAS Registry Number
869340-00-0 CAPLUS

Chemical or Trade Name
Benzonitrile, 4,4'-(1,3,8-dibromo-1,6-pyrenediyl)bis- (CA INDEX NAME)



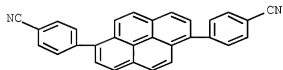
CAS Registry Number
869340-00-0 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-bis[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)



CAS Registry Number
869340-10-3 CAPLUS

Chemical or Trade Name
Benzonitrile, 4,4'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



09 CITING REF COUNT: 0 THREE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD
(23 CITING88)

L5 ANSWER 28 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005 1192864 CAPLUS [Full Text](#)

Document Number

143 448 114

Title

Organic electroluminescent device containing metal element and its fabrication process

Author/Inventor

Ito, Yukihiro Nakayama, Masaya

Patent Assignee/Corporate Source

Fujitsu Limited, Japan

Source

PCT Int. Appl., 28 pp. CODEN: PBKX22

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

| | | | | |
|----------------|----|----------|------------------|----------|
| WO 2005107329 | A1 | 20051110 | WO 2004-086047 | 20040427 |
| CN 1977567 | A | 20070406 | CN 2004-80042888 | 20060427 |
| CN 100981309 | C | 20100113 | | |
| US 20070231597 | A1 | 20071004 | US 2006-087602 | 20061026 |
| US 7737632 | B2 | 20100615 | | |
| KR 2007015438 | A | 20070202 | KR 2006-7024508 | 20061123 |
| KR 832763 | B1 | 20080527 | | |
| US 20100216269 | A1 | 20100826 | US 2010-771127 | 20100430 |

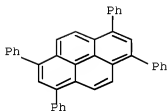
Abstract

The invention relates to an organic electroluminescent device (EL) comprising a pos. electrode and a neg. electrode and, interposed there-between, a laminate structure of organic films including at least a luminescent layer, a hole transport layer adjacent to the pos. electrode side of the luminescent layer and an electron transport layer adjacent to the neg. electrode side of the luminescent layer, wherein at least one of the organic films constituting the laminate structure contains a metal element exhibiting reactivity with water or oxygen.

HR Structure

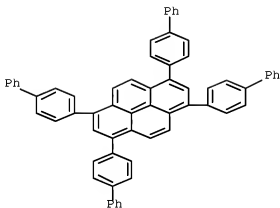
CAS Registry Number
13630-02-9 CNP109

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



CAS Registry Number
792273-07-3 CNP109

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraakis[1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



Accession Number 20051173780 CAPLUS Full-text

Document Number 143.442422

Title

Electroluminescent fluorinated pyrenes and LED devices made with such compounds.

Author/Inventor

Koten, Alex Sergey; Wang, Ying

Patent Assignee/Corporate Source

E.I. Du Pont De Nemours and Company, USA

Source

U.S. Pat. Appl. Publ., 11 pp CODEN USOXCO

Document Type

Patent

Language

English

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|-----------------|----------|
| US 20050244645 | A1 | 20051103 | US 2004-833787 | 20040628 |
| US 7358406 | B2 | 20080415 | | |

Abstract

Fluorinated pyrenes (I) (R = H or fluorine or fluoroalkyl-substituted aryl groups) prepared by Suzuki coupling from chloro-substituted pyrenes and fluoro-derivs. of arylboronic acid are used in an active layer of LED sandwiched between two elec. contact layers. Thus, 1,3,6,8-tetraakis-(5,5-trifluoromethyl)phenylpyrene prepared by using 3.95 g of 1,3,6,8-tetrachloropyrene, 19.0 g of 5,5-bis(trifluoromethyl)phenylboronic acid, 1.33 g of tris(dibenzylideneacetone)dipalladium, 0.64 g of bis(1,1-dimethylethyl)dimethylsilylphosphine, 18.95 g of cesium carbonate and 100 mL of toluene 24 h at room temperature having quantum yield of fluorescence $\times 0.6$ was used in OLED devices fabricated by the thermal evaporation using ITO coated glass substrate, triphenylamine dye MPMP as a hole transport material, electron transport material, Al-complex as an electron injection material and carbazole biphenyl as a host material.

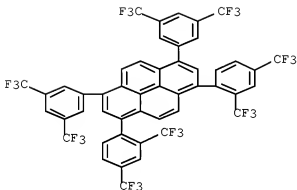
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CAS Registry Number

868555-89-5 CAPLUS

Chemical or Trade Name

Pyrene, 1,3-bis[2,4-bis(trifluoromethyl)phenyl]-5,6-bis[3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)

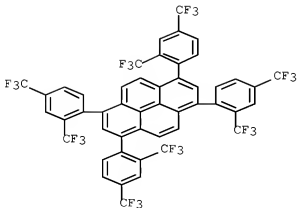


CAS Registry Number

868555-10-0 CAPLUS

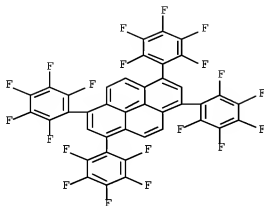
Chemical or Trade Name

Pyrene, 1,3,6,8-tetraakis[2,4-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)



CAS Registry Number
865556-11-9 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetrakis[2,3,4,5,6-pentafluorophenyl]- (CA INDEX NAME)



L5 ANSWER 30 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2005119359 CAPLUS [Full Text](#)

Document Number
143 413225

Title
Preparation of silylated pyrenes and their use in active layers of electroluminescent devices

Author/Inventor
Ionken, Alex Sergey; Wang, Ying

Patent Assignee/Corporate Source
E I Du Pont De Nemours and Company, USA

Source
U.S. Pat. Appl. Publ. 9 pp CODEN USXXCO

Document Type
Patent

Language
English

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|-----------------|----------|
| US 20050238910 | A1 | 20051027 | US 2004-031849 | 20040424 |
| US 7239019 | B2 | 20070619 | | |

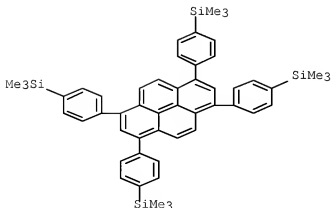
Abstract

This invention relates to electroluminescent silylated pyrene compounds. It also relates to electronic devices in which the active layer includes an electroluminescent silylated pyrene compound. Thus, e.g., Suzuki coupling of 1,3,6,8-tetrachloropyrene with 3-(trimethylsilyl)phenylboronic acid in presence of Pd(PPh₃)₄ (preparation given), and CuI/CO₂ in dioxane afforded 12.6% 1,3,6,8-tetrakis[3-(trimethylsilyl)phenyl]pyrene that exhibited an emission maximum at 420 nm in CH₂Cl₂ and that was fabricated into an OLED as emitter with peak efficiency of 0.6 cd/A, peak radiance 700 cd/m², and peak λ 's of 450 and 490 nm.

Hit Structure

CAS Registry Number
867558-49-9 CAPLUS

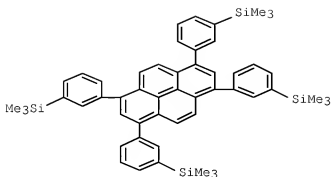
Chemical or Trade Name
Pyrene, 1,3,6,8-tetrakis[4-(trimethylsilyl)phenyl]- (CA INDEX NAME)



CAS Registry Number

067058-50-2 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetra[3-(trimethylsilyl)phenyl]- (CA INDEX NAME)



06 CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(2 CITINGS)

LS ANSWER 31 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
20051154873 CAPLUS Patent
Document Number
143 429526

Title
Organic electroluminescent device and organic electroluminescent display

Author/Inventor
Ita, Yuichiro
Patent Assignee/Corporate Source
Fujitsu Limited, Japan

Source
PCT Int. Appl., 32 pp. CODEN: POKXD2

Document Type
Patent

Language
Japanese

| Patent Information | | | | | |
|--------------------|------|----------|-----------------|----------|--|
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| WO 2005101911 | A1 | 20051027 | WO 2004-094662 | 20040331 | |
| TW 252051 | B | 20060321 | TW 2004-109475 | 20040330 | |
| JP 4434003 | B2 | 20100324 | JP 2004-012162 | 20040331 | |
| US 20070285005 | A1 | 20071213 | US 2007-594600 | 20070608 | |
| US 7871711 | B2 | 20110110 | | | |

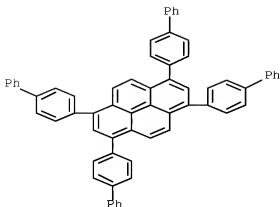
Abstract

An organic electroluminescent (EL) device comprises an anode, a hole injection layer, a hole transport layer, a blue light-emitting layer, a hole blocking layer, an electron transport layer, and a cathode formed sequentially on a glass substrate wherein the chromaticity of blue is enhanced while prolonging the lifetime by composing the electron transport layer of an electron transport material and a light-emitting material having a peak wavelength of emission spectrum longer than 505 nm, consuming holes by the light-emitting material and suppressing deterioration of the electron transport material.

Hit Structure

CAS Registry Number
791273-07-3 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetra[3,1'-biphenyl]-4-yl- (CA INDEX NAME)



US ANSWER 32 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
20051132554 CAPLUS PubChem
Document Number
143-026603

Title
Organic electroluminescent device

Author/Inventor
Funabashi, Masakazu
Patent Assignee/Corporate Source
Idemitsu Kosan Co., Ltd., Japan

Source
Jpn. Kokai Tokkyo Koho, 28 pp. CODEN: JKKXAF

Document Type
Patent

Language
Japanese

Patent Information

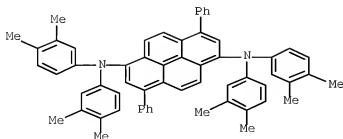
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|-----------------|----------|
| JP 2005303667 | A | 20050327 | JP 2004-120623 | 20040415 |
| WO 2005101913 | AI | 20050327 | WO 2005-094996 | 20050409 |
| EP 1737277 | AI | 20060327 | EP 2005-128719 | 20050409 |
| CN 1943278 | A | 20070404 | CN 2005-8001343 | 20050409 |
| US 2007020394 | AI | 20070830 | US 2006-947293 | 20061003 |
| IN 2006CH03782 | A | 20070802 | IN 2006-CN3792 | 20061012 |
| KR 2007004643 | A | 20070109 | KR 2006-7021957 | 20061013 |

Abstract
The invention relates to an organic electroluminescent device comprising an electroluminescent layer sandwiched between a pair of electrodes, wherein the electroluminescent layer comprises C10-100 aryl amine and a condensed ring-containing substance represented by (Ar)-L (Ar = C6-30 aromatic hydrocarbon and C3-30 aromatic heterocyclic; a = 2-6 integer; L = a valent condensed polycyclic aromatic residue).

Hit Structure

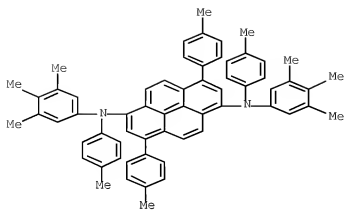
CAS Registry Number
7646577-27-4 CAPLUS

Chemical or Trade Name
1,6-bis(2,6-dimethylphenyl)-3,4,9,10-tetraakis(3,4-dimethylphenyl)-9,10-bis(2,6-dimethylphenyl)-
(CA 2005-04-09)



CAS Registry Number
969273-29-4 CAPLUS

Chemical or Trade Name
1,6-bis(2,6-dimethylphenyl)-3,4,9,10-tetraakis(3,4-dimethylphenyl)-9,10-bis(2,6-dimethylphenyl)-
(CA 2005-04-09)



OR CITING REF COUNT: 1 THERE ARE 1 CAPSUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

L5 ANSWER 33 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005114829 CAPLUS [Full-text](#)

Document Number

14429415

Title

Lateral organic light-emitting diode with field-effect transistor characteristics

Author/Inventor

Oyamada, Takahito, Uchiyama, Hiroyuki, Miyama, Seiji, Oka, Yoshitaki, Shirogi, Noriyuki, Matsushige, Kazumi, Sasaki, Hiroyuki, Adachi, Chihaya

Patent Assignee/Corporate Source

Department of Photonics Materials Science, Chitose Institute of Science and Technology (CIST), 758-65 Bita, Chitose, Hokkaido, 066-8655, Japan

Source

Journal of Applied Physics (2005), 98(7), 074506/1-074506/7 CODEN JAPPAU, ISSN: 0021-8979

Document Type

Journal

Language

English

Abstract

Bright electroluminescence (EL) was observed from 1%-rubrene doped tetraphenylpyrene (TPPy) as an active layer in a lateral organic LED structure that allowed FET operation. This device configuration provides an organic LED structure where the anode (source) and cathode (drain) electrodes are laterally arranged, providing one a chance to control the EL intensity by changing the gate bias. TPPy provides compatible transistor and EL characteristics. Rubrene doping into the TPPy host and adjusting the source-drain channel length significantly improved the EL characteristics. A maximum EL quantum efficiency (yield of approx 0.8%) was observed with a C-Au source (S)-drain (D) electrode and a slightly higher yield of approx 0.8% with S-D electrodes of Mg:Ru/Au, Al:Ru, C-V/AuRu, and Ag:Al:Ru multilayers, among for simultaneous hole and electron injection.

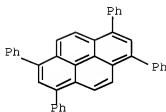
HE Structure

CAS Registry Number

13630-83-9 CN100

Chemical or Trade Name

Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



06 CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L5 ANSWER 34 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005104257 CAPLUS [Full-text](#)

Document Number

143347290

Title

Preparation of polycyclic hydrocarbon organosulfones, process for production of the same, and use thereof

Author/Inventor

Nakagawa, Masatoshi, Hanato, Hiroyuki, Tamura, Toshio, Imada, Hiroshi

Patent Assignee/Corporate Source

Osaka Kasei Kasei, Japan

Source

PCT Int Appl, 131 pp CODEN PXXXX

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|------------------|----------|
| WO 200509365 | A1 | 20050929 | WO 2005-09456 | 20050316 |
| JP 2005043721 | A | 20050929 | JP 2004-00333 | 20040319 |
| JP 2005049106 | A | 20050929 | JP 2004-00375 | 20040319 |
| JP 4416546 | B2 | 20100217 | | |
| JP 2004062964 | A | 20060309 | JP 2004-24208 | 20040924 |
| JP 2005094485 | A | 20050927 | JP 2005-07516 | 20050310 |
| CN 1950382 | A | 20070418 | CN 2005-00014602 | 20050316 |
| JP 2005094496 | A | 20050927 | JP 2005-07647 | 20050310 |
| JP 4612443 | B2 | 20110112 | | |
| US 20080207864 | A1 | 20080829 | US 2006-59204 | 20060310 |

Abstract

Organosulfones represented by the general formula (I)-(IX)XOX3 [wherein T is an organic group derived from a fused polycyclic hydrocarbon constituted of two to ten 5- and/or 6-membered monocyclic hydrocarbons, e.g., Q, Q', Q'', and Q3 [wherein n1 is an integer of 0 to 10, n2 and n3 are an integer of 0 and the sum of n2 and n3 is 1 to 9] k is an integer of 1 to 10, and at least one of X1 to X3 is a group capable of giving hydroxyl through hydrolysis or halogeno, and the others are each a group next to the adjacent one], is prepared. Organic thin films of organosulfones and organic electroluminescent device fabricated from organic thin films using organosulfones are also disclosed. Thus, 6-bromo-2,7,8,2'-terphenylthiophene was treated with Mg at 60° for 1 h in THF to give the Organized reagent which was reacted with chlorotriethoxysilane at 60° for 2 h to give 40% 6-chlorotriethoxy-2,7,8,2'-terphenylthiophene (I). A 2 ml solution of 3-[6-bromo-2,7,8,2'-terphenylthiophen-6-yl]-6-dimethylthiopyranoside (II) (preparation given) in CHCl3 (100 μ l) was added dropwise to water to form a monolayer on the water surface which was transferred on a substrate to form a Langmuir-Blodgett film (LB) film (average thickness: approx 2.0 nm of monolayer).

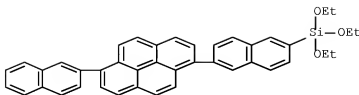
HE Structure

CAS Registry Number

85640-90-2 CN100

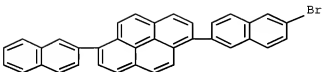
Chemical or Trade Name

Pyrene, 1-[(2-naphthalenyl)-6-{6-[(trifluoromethyl)-2-naphthalenyl]}-4-CA INDEX NAME]



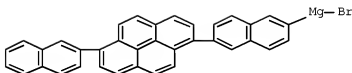
CAS Registry Number
865640-04-0 CASLOG

Chemical or Trade Name
Pyrene, 1-[(6-bromo-2-naphthalenyl)-6-(2-naphthalenyl)]- (CA INDEX NAME)



CAS Registry Number
865640-05-1 CASLOG

Chemical or Trade Name
Magnesium, hexa[5-(6-(2-naphthalenyl)-1-pyrenyl)-2-naphthalenyl]- (PCEI)
(CA INDEX NAME)



05 CITING REF COUNT: 8 THERE ARE 8 CASLOG RECORDS THAT CITE THIS RECORD
(14 CITINGS)

15 ANSWER 39 OF 39 CASLOG COPYRIGHT 2011 ACS on STN

Accession Number
20050601567 CASLOG Fulltext

Document Number
143296816

Title
White organic electroluminescence device

Author/Inventor
Takahara, Hiroshi, Fukusaka, Kenichi, Kubota, Mineyuki, Funahashi, Masakazu
Patent Assignee/Corporate Source
Sumitomo Kasei Co., Ltd., Japan

Source
PCT Int. Appl., 69 pp. CODEN: PEXD22

Document Type
Patent

Language
Japanese

Parent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|------------------|-----------|
| WO 20050601567 | A1 | 20050601 | WO 2005-092442 | 200506217 |
| EP 1719124 | A1 | 20060102 | EP 2005-719244 | 200506217 |
| CN 1879454 | A | 20060223 | CN 2005-80001270 | 200506217 |
| US 20070063638 | A1 | 20070222 | US 2006-573661 | 20060328 |
| KR 2006115272 | A | 20061109 | KR 2006-700168 | 20060427 |

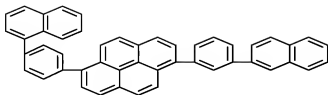
Abstract

The invention refers to a white organic electroluminescence device comprising a neg. electrode and a pos. electrode and, interposed there between, one or more organic thin film layers including at least a light emitting layer, wherein the light emitting layer is constituted of a laminate of blue color light emitting layer and yellow-to-red color light emitting layer and contains an organ. condensed ring containing compound. This white color organic electroluminescence device realizes reduced chromaticity changes and excels in luminous efficiency and thermal stability, ensuring strongly prolonged service life.

Hit Structure

CAS Registry Number
8613252-20-0 CASLOG

Chemical or Trade Name
Pyrene, 1-[(3-(12-naphthalenyl)phenyl)-6-[4-(12-naphthalenyl)phenyl]]- (CA INDEX NAME)



CS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(7 CITINGS)

LD ANSWER 36 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2009 656260 CAPLUS Publist

Document Number

143 277523

Title

Tetra-substituted pyrenes: new class of blue emitter for organic light-emitting diodes

Author/Inventor

Gotoyama, Wataru; Sato, Hiroyuki; Kinoshita, Masaru; Takahashi, Toshiro; Matsura, Azuma; Kodama, Jun; Sawastsi, Norio; Inoue, Hiroshi

Patent Assignee/Corporate Source

Functional Organic Materials Laboratory, Fujitsu Laboratories Limited, Maruoka-2-Wakamaya, Atsugi, 243-0197, Japan

Source

Digest of Technical Papers - Society for Information Display International Symposium (2009), 34, 1294-1297 CODEN: DTPSDG

Document Type

Journal (computer optical disk)

Language

English

Abstract

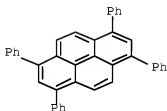
We have developed a new class of highly-fluorescent blue emitter for organic light-emitting diodes (OLEDs) consisting of tetra-substituted pyrenes. From the anal of the excited state diagrams of pyrene and its derivs. by MO calcs., we found that the new tetra-substituted pyrenes are highly fluorescent. OLEDs fabricated using the synthesized tetra-substituted pyrenes as emitters showed high efficiency and good color purity.

Hit Structure

CAS Registry Number
13630-02-9 CNF020

Chemical or Trade Name

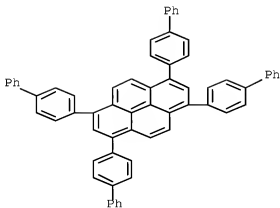
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



CAS Registry Number
790273-07-3 CNF170

Chemical or Trade Name

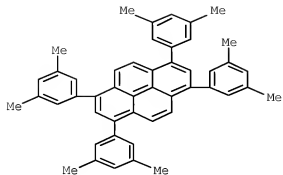
Pyrene, 1,3,6,8-tetrakis[11,1'-biphenyl]-4-yl- (CA INDEX NAME)



CAS Registry Number

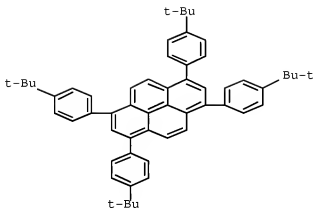
863639-30-9 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraakis[3,5-dimethylphenyl]- (CA INDEX NAME)



CAS Registry Number
863639-31-0 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraakis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



CS CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)

Accession Number

2005-234413 CAPLUS [Full-text](#)

Document Number

14413629

Title

High-performance blue OLEDs based on a sterically hindered pyrene host material

Author/Inventor

Yeh, Chia-Chun; Lee, Meng-Ting; Chen, Hsian-Hung; Chen, Chen-H

Patent Assignee/Corporate Source

Department of Applied Chemistry, National Chiao Tung University, Hsinchu, Taiwan, 300, Taiwan

Source

Digest of Technical Papers - Society for Information Display International Symposium (2004), 35, 788-791 CODEN: DTPE0G

Document Type

Journal, (computer optical disk)

Language

English

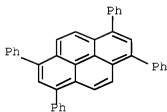
Abstract

The authors developed a blue organic light-emitting device (OLED) emitter based on a sterically hindered fluorescent host material of tetra-*tert*-phenyl (TTFP) which effectively suppresses the excimer emission of its electroluminescence. Dispersed with DGA-Ph of matching LUMO/HOMO, TTFP was used to produce a blue device with luminance efficiency of 8.64 cd/A at 20 mA/cm² and 7.1 V with a CIE(x,y) color coordinate of [0.15, 0.24]. The properties of selected 1,3,6,8-tetraphenylpyrenes were measured and compared with conventional anthracene-based materials.

HR Structure

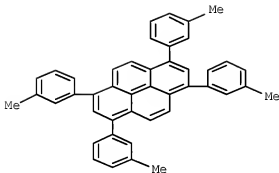
CAS Registry Number
13638-82-9 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



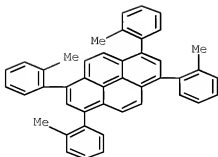
CAS Registry Number
870133-11-4 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetrakis[3-methylphenyl]- (CA INDEX NAME)



CAS Registry Number
870133-12-5 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetrakis[2-methylphenyl]- (CA INDEX NAME)



06 CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)

L5 ANSWER 39 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2005323561 CAPLUS [Fulltext](#)
Document Number
142391949

Title
Pyrene derivative, light emitting element, and light emitting device

Author/Inventor
Nomura, Ryoji, Takasu, Takao, Abe, Hiroko, Torioka, Atsushi
Patent Assignee/Corporate Source
Semiconductor Energy Laboratory Co., Ltd., Japan

Source
U.S. Pat. Appl. Publ. 22 pp CODEN USXXCO

Document Type
Patent

Language
English

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|-----------------|----------|
| US 20050079395 | A1 | 20050414 | US 2004-954341 | 20041101 |
| US 7282619 | B2 | 20070619 | | |
| JP 2005124431 | A | 20050519 | JP 2004-269684 | 20041001 |

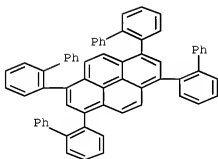
Abstract

It is an object of the present invention to provide a pyrene derivative that is unlikely to crystallize and is superior in quality in the case of forming a film. It is an object of the present invention to provide a light-emitting element from which stable light emission can be obtained for a long stretch of time by using the pyrene derivative [R1-6 = C1-6 alkyl, alkoxy, aryl, diarylamino or silyl with one or more alkyl or aryl groups]. By using vacuum deposition to deposit this material, a light-emitting element from which stable light emission can be obtained efficiently for a long stretch of time can be obtained.

Hit Structure

CAS Registry Number
723255-24-5 CAPLUS

Chemical or Trade Name
Etycene, 1,3,6,8-tetrakis[1(1'-biphenyl)-2-yl]- (CA INDEX NAME)



06 CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L5 ANSWER 39 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2005292293 CAPLUS [Fulltext](#)
Document Number
14216108

Title
White organic light-emitting diode comprising of blue fluorescence and red phosphorescence

Author/Inventor
Oo, Dae-han, Tao, Ye
Patent Assignee/Corporate Source
National Research Council of Canada, Institute for Microstructural Sciences, Ottawa, ON, K1A 0R6, Can
Source

A white organic light-emitting diode with the structure of ITO/NPB 50 nm/TCTA:7% TRP 10 nm/BCP 6 nm/Ag 40 nm/Mg Ag was fabricated and characterized, where 2,5'-bis(4-phenylphenyl)pyrene and bis(1-phenylisoquinoline) Ir (III) [Ir(ppy)₃] were used as a blue fluorescent dye and a red phosphorescent dye, respectively. The I-V characteristics of the device showed a turn-on voltage of 2.6 V. The electroluminescent spectra of the device consisted of blue fluorescent and red phosphorescent emissions. The intensity of the blue emission increased gradually relative to the red emission with increasing voltage. The emissions of the device were in the white-light region between 10 and 15 V. A maximum white-light luminance of 1078 cd/m² with CIE coordinates of (x, y) = (0.27, 0.34) was reached at 15 V with an efficiency of 1.30 cd/A. The white-light emission is related to the simultaneous exciton formation on both sides of the TCTA/BCP interface.

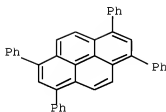
Hit Structure

CAS Registry Number

21620-62-9 (21620)

Chemical or Trade Name

Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



GO-CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITING)

LS ANSWER 40 OF 89 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005 212854 CAPLUS Fulltext

Document Number

142 287607

Title

Organic electroluminescent devices showing high luminescence efficiency and good durability

Author/Inventor

Arai, Kazumi, Igarashi, Tetsuya, Mashima, Masayuki

Patent Assignee/Corporate Source

Fuji Photo Film Co., Ltd., Japan

Source

Japan Kokai Tokkyo Koho, 48 pp. CODEN: JKKXAF

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2005063938 | A | 20050310 | JP 2004-72452 | 20040315 |

Abstract

The devices have emitter layers containing first metal complex hosts having T_g > 140°, second condensed aromatic compound hosts having decomposition starting temperature > 330°, and luminescent materials. Thus, an organic device used an emitter layer containing bis(8-hydroxyquinolinato)aluminum, 1,3,5-tris(4-phenylphenyl)benzene, and red-emitting styryl compound I.

Hit Structure

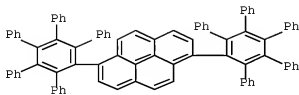
CAS Registry Number

647142-32-3 (647142)

Chemical or Trade Name

Pyrene, 1,6-bis(4',5',6'-triphenyl[2,2',1'2'',2''-terphenyl]-3'-yl)- (16CT)

(CA INDEX NAME)



L5 ANSWER 41 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2005 191766 CAPLUS [Full-text](#)
Document Number
142 400200

Title
Increased electrophosphorescent efficiency in organic light emitting diodes by using an exciton-collecting structure

Author/Inventor
Ohi, Daisuke, Tao, Ye
Patent Assignee/Corporate Source
National Research Council of Canada, Institute for Microstructural Sciences, Ottawa, ON, K1A 6R6, Can.
Source
Journal of Applied Physics (2005), 97(4), 044505-1-044505-6 CODEN: JAPFAU, ISSN: 0021-8979

Document Type
Journal

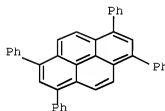
Language
English

Abstract
A phosphorescent dye, tris(1-phenylquinolin-2-yl) Ir (III) [Ir(pq)₃] doped interface of 4,4'-C'-bis(isobenzofen-9-yl)-biphenyl-1,1'-bis(4-phenyl-2,3-dimethyl-4,7-diphenyl-1,10-phenanthroline) (BCP) was studied in organic light emitting diodes. Two devices with different emissive interfaces, TCTA+6% Ir(pq)₃/BCP and TCTA+6% Ir(pq)₃/BCP+1% Ir(pq)₃, exhibited nearly the same red Ir(pq)₃ emissions and I-V characteristics. However, the 2nd device showed higher efficiency and luminance than the 1st device over the whole voltage range. The maximum efficiency of 6.0 cd/A reached at 6.05 mA/cm² in the 2nd device was 20% higher than that of 4.6 cd/A reached at 6.05 mA/cm² in the 1st device. The improved performance of the 2nd device is attributed to the fact that the excitons can be formed on both sides of the TCTA/BCP interface and can be more efficiently collected with the 1% Ir(pq)₃ doped in the BCP layer. Therefore, the exciton-collecting structure, doping phosphorescent dyes into both sides of the TCTA/BCP interface, is believed to be a very useful way to optimize the performance of phosphorescent organic light emitting diodes.

HR Structure

CAS Registry Number
11638-82-9 CASLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



L5 ANSWER 42 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2005 75601 CAPLUS [Full-text](#)
Document Number
142 186928

Title
Organic electroluminescent (EL) devices with improved electron-injection efficiency and full-color flat displays using them

Author/Inventor
Nakayama, Masaya, Kinoshita, Sho, Kodama, Atsushi
Patent Assignee/Corporate Source
Pajitsu Ltd., Japan
Source
Jpn. Koho Tokai Koho, 20 pp. CODEN: JHOXAF

Document Type
Patent

Language
Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2005042410 | A | 20050127 | JP 2004-45516 | 20040323 |

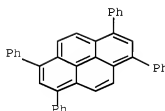
Abstract

The devices have hole-transporting layers, light-emitting layers, and electron-transporting layers in the order between anodes and cathodes, satisfying $|E(\text{anode}) - E(\text{hole})| \geq 1.5 \text{ eV}$ and $|E(\text{cathode}) - E(\text{electron})| \geq 1.5 \text{ eV}$. $E(\text{hole})$ [eV], $E(\text{electron})$ [eV] = electron affinity of light-emitting layer, hole-transporting layer, and electron-transporting layer, resp. The displays, using the devices as blue-emitting sources, show improved brightness.

HR Structure

CAS Registry Number
11638-82-9 CASLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



ON CITING REF. COUNTRIES: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L5 ANSWER 43 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
20041039004 CAPLUS [PubLed](#)
Document Number
142129757

Title

Olefinary compounds, their organic solutions for manufacture of luminescent films, and blue-emitting organic electroluminescent devices using them

Author/Inventor

Inoue, Tetsuya; Ikeda, Shuy; Hosokawa, Chisao

Patent Assignee/Corporate Source

Kanibusa Kasei Co., Ltd., Japan

Source

Jpn. Kokai Tokkyo Koho, 49 pp. CODEN: JP00AF

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|-----------|------------------|----------|
| JP 2004339136 | A | 200401202 | JP 2003-136839 | 20030515 |
| WO 2004110968 | A1 | 200401223 | WO 2004-036331 | 20040430 |
| EP 1623968 | A1 | 20060208 | EP 2004-730688 | 20040430 |
| CN 1791567 | A | 20060623 | CN 2004-80013354 | 20040430 |
| US 20070042220 | A1 | 20070222 | US 2005-556530 | 20051114 |

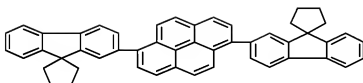
Abstract

The compounds are (Sp)nYm (Sp = dibenzospiro groups I, L = single bond, (CR1R2)m, O, CO, NR1, R1* = H, 6-50-membered aromatic group, 5-50-membered aromatic heterocyclylene, C1-50 alkyl, Z = C, Si, Ge, Q = groups necessary for forming cyclic structure, R = 6-50-membered aromatic group, 5-50-membered aromatic heterocyclyl, C1-50 alkyl, etc., X = 5-50-membered aromatic group, 12-20-membered condensed aromatic group, 5-50-membered aromatic heterocyclylene other than (poly)ethynylene, Y = (vinyl linkage-containing) 5-50-membered aromatic group, a, b = 0-4, a + b = 0, n = 0-2, m = 1-4). The compounds show good heat resistance and organic solvent solubility. Thus, diphenylmethylenefluorene II was manufactured and used for a blue-emitting organic electroluminescent device.

Hit Structure

CAS Registry Number
795560-33-1 CAPLUS

Chemical or Trade Name
Spiro[fluorene-1,2'-2''']-(1,6-pyrimidinyl)lim- ICA
INDEX NAME



08 CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

15 ANSWER 44 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
20041039145 CAPLUS [PubLed](#)
Document Number
14213489

Title

White-emitting organic electroluminescent devices employing a light-emitting materials containing substituted pyrene structural units

Author/Inventor

Sakamoto, Yutaka; Ichimura, Man; Kashiwazaki, Mitsuhiro; Tamura, Shinichi

Patent Assignee/Corporate Source

Sony Corporation, Japan

Source

Eur. Pat. Appl., 20 pp. CODEN: EPX0DW

Document Type

Patent

Language

English

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|-----------|------------------|----------|
| EP 1482573 | A2 | 200412101 | EP 2004-12472 | 20040526 |
| EP 1482573 | A3 | 20070725 | | |
| TW 241362 | B | 20070511 | TW 2004-115125 | 20040527 |
| KR 2004103439 | A | 20041204 | KR 2004-38477 | 20040528 |
| JP 2005011806 | A | 20050113 | JP 2004-159069 | 20040528 |
| JP 4029547 | B2 | 20080825 | | |
| US 20070192566 | A1 | 20070705 | US 2004-856043 | 20040528 |
| US 7246116 | B2 | 20070717 | | |
| CN 1575067 | A | 20050202 | CN 2004-10076617 | 20040531 |
| CN 100233811 | C | 20090826 | | |

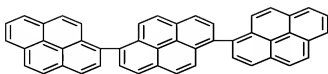
Abstract

Organic electroluminescent devices are described which comprise an organic layer having a light-emission region and being disposed between an anode and a cathode, where the organic layer contains, as an organic light-emitting material, a compound represented by formula (1) where each of R1-R6 represents a substituent selected from a group consisting of a hydrogen atom, a halogen atom, a hydroxy group, a mercapto group, a nitrile group, an amino group, a cyano group, an alkyl group, an alkyl group, a cycloalkyl group, an alkoxy group, an allyl group, a silyl group, an aryl silyl group, an alkenyl group, an aromatic hydrocarbon group, an aromatic heterocyclic group, an ester group, an acryloyl group, a benzoyl group, an alkoxybenzoyl group, and a carbonyl group, and n is a numeric value from 1 to 3.

Hit Structure

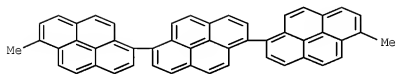
CAS Registry Number
791001-13-9 CAPLUS

Chemical or Trade Name
1,1'4,4',1''-terpyrene (9CI) (CA INDEX NAME)



CAS Registry Number
797057-74-0 CAS#797057

Chemical or Trade Name
1,1'4,4',1''-terpyrene, 6,6''-dimethyl- (9CI) (CA INDEX NAME)



OR CITING REF COUNT: 2 THERE ARE 2 CAS/US RECORDS THAT CITE THIS RECORD
(2 CITINGS)

Accession Number

2004 953284 CAPLUS [Full-text](#)

Document Number

141 403312

Title

1,3,6,8-Tetrasubstituted pyrene compounds, organic electroluminescent device and organic electroluminescent display

Author/Inventor

Saitohama, Wataru, Sato, Hiroyuki, Matsushima, Azuma, Kinoshita, Masaru, Takahashi, Toshio

Patent Assignee/Corporate Source

Fujitsu Limited, Japan

Source

PCT Int. Appl., 67 pp. CODEN: PBOXD2

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|-----------------|----------|
| WO 2004094945 | A1 | 20041111 | WO 2003-JP9577 | 20030501 |
| JP 1421597 | A1 | 20060201 | JP 2003-721011 | 20030501 |
| US 20050234920 | A1 | 20051027 | US 2005-166692 | 20050627 |

Abstract

The invention refers to an organic electroluminescent device containing, as a luminescent material, a 1,3,6,8-tetrasubstituted pyrene compound wherein the substituents are Ph rings with at least one substituted aryl as a substituent.

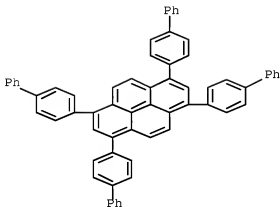
HR Structure

CAS Registry Number

790273-07-3 CAPLUS

Chemical or Trade Name

Pyrene, 1,3,6,8-tetrakis[1(1',1'-biphenyl)-4-yl]- (CA INDEX NAME)

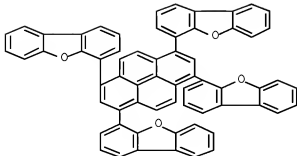


CAS Registry Number

790273-08-4 CAPLUS

Chemical or Trade Name

Dibenzofuran, 6,6',4'',4'''-(1,3,6,8-pyrenetetrayl)tetrakis- (9CI) (CA INDEX NAME)



09-CITING REF COUNT:

9

THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (18 CITINGS)

Accession Number
2004/063198 CAPLUS [Epub](#)
Document Number
141 403311

Title
1,3,6,8-Tetrasubstituted pyrene compounds, organic electroluminescent device and organic electroluminescent display

Author/Inventor
Sotomura, Wataru
Patent Assignee/Corporate Source
Fujitsu Limited, Japan

Source
PCT Int. Appl., 45 pp. CODEN: P00XD2

Document Type
Patent

Language
Japanese
Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|-----------------|-----------|
| WO 2004094743 | A1 | 20041111 | WO 2003-095417 | 200310429 |
| EP 1419177 | A1 | 20040125 | EP 2003-720002 | 200310429 |
| EP 1419177 | B1 | 20040227 | | |
| JP 4192152 | B2 | 20091203 | JP 2004-071293 | 200310429 |
| US 20050156164 | A1 | 20050721 | US 2005-74999 | 20050309 |
| US 7571894 | B2 | 20090811 | | |

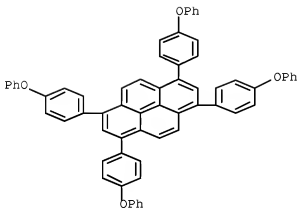
Abstract

The invention refers to an organic electroluminescent device containing, as a luminescent material, a 1,3,6,8-tetrasubstituted pyrene compound wherein the substituents are Ph rings containing at least one of the following as a substituent: -OR¹, -OR², -OR³, -OR⁴, -OR⁵, -OR⁶, -OR⁷, -OR⁸, -OR⁹, -OR¹⁰, -OR¹¹, or -OR¹² [R¹-R¹² = H or substituent].

Hit Structure

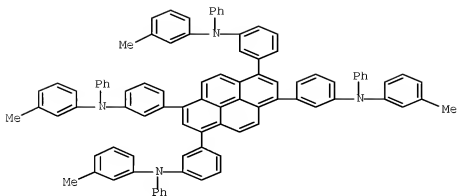
CAS Registry Number
790722-24-3 CAPLUS

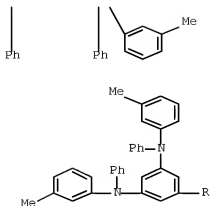
Chemical or Trade Name
Pyrene, 1,3,6,8-tetrakis[4-(phenoxy)phenyl]- (CA INDEX NAME)



CAS Registry Number
790722-24-3 CAPLUS

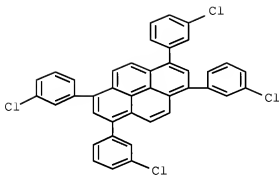
Chemical or Trade Name
Benzenamine, 3,3',3'',3'''-(1,3,6,8-pyrenetetrayl)tetrakis[4-(4-methylphenyl)]-4-phenyl- (CA INDEX NAME)





CAS Registry Number
750721-23-6 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,9-tetrakis(3-chlorophenyl)- (CA INDEX NAME)



CG CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(9 CITINGS)

L5 ANSWER 47 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number

2004-795049 CAPLUS Fulltext

Document Number
141 304090

Title

Process for preparation of 1,6-bis(diphenylamino)pyrene derivatives as electroluminescent devices

Author/Inventor

Furushashi, Masakazu

Patent Assignee/Corporate Source

Idemitsu Kosan Co Ltd Japan

Source

PCT Int Appl, 51 pp CODEV PROXD2

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO | DATE |
|----------------|------|----------|------------------|----------|
| WO 2004083162 | A1 | 20040930 | WO 2004-092905 | 20040308 |
| EP 1604974 | A1 | 20051214 | EP 2004-718438 | 20040308 |
| CN 1784376 | A | 20060607 | CN 2004-80012602 | 20040308 |
| CN 101343234 | A | 20090314 | CN 2008-10099980 | 20040308 |
| JP 4267423 | B2 | 20090527 | JP 2005-503649 | 20040308 |
| TN 2005CN02302 | A | 20070404 | TN 2005-CN2302 | 20050919 |
| IN 229393 | A1 | 20090320 | | |
| US 20070009758 | A1 | 20070111 | US 2005-549801 | 20051121 |

| | | | | |
|----------------|---|----------|----------------|----------|
| IN 2008CN16126 | A | 20090109 | IN 2008-CN1626 | 20080401 |
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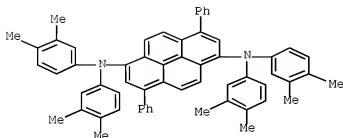
Abstract

This invention pertains to a method for producing [diphenylamine]pyrene dyes 1 [wherein R = H, (substituted alkyl, aryl, silyl), etc. R = (substituted diphenylamine, q = 1-9, p = 1-9, with limitation of p + q < 10) which are useful as electroluminescent devices. For example, 1,6-dioxepylene was reacted with 4-isopropylphenylamine in toluene in the presence of $\text{Pd}(\text{OAc})_2$, t-BuBP, and t-BuOK to give 1,6-bis(4-isopropylphenylamino)pyrene. 1 were tested as organic electroluminescent devices which have a long life and emit a blue color at a high luminescence efficiency.

Hb Structure

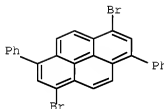
CAS Registry Number
76451-20-5 CAPLUS

Chemical or Trade Name
1,6-Pyrene-diamine, N,N'-bis(4-isopropylphenyl)-3,4-dimethylphenyl-3,8-diphenyl-
(CA INDEX NAME)



CAS Registry Number
76451-20-5 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-bis(4-isopropyl-3,8-diphenyl)- (CA INDEX NAME)



CS CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

LS ANSWER 48 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2004756795 CAPLUS ~~Fulltext~~

Document Number

14128557

Title

Organic electroluminescent device employing a derivative of 9,10-dianthracene as a green luminescent dopant

Author/Inventor

Seo, Jeong Dae, Kim, Hee Jung, Lee, Kyung Hoon, Oh, Hyung Yoon, Kim, Myung Seop, Park, Chun Gun

Patent Assignee/Corporate Source

LG Electronics Inc., S. Korea

Source

PCT Int. Appl., 35 pp. CODEN: POKXD2

Document Type

Patent

Language

English

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|------------------|----------|
| WO 2004078872 | A2 | 20040916 | WO 2004-08472 | 20040305 |
| WO 2004078872 | A3 | 20041216 | | |
| KR 2004079603 | A | 20040916 | KR 2003-20466 | 20030401 |
| US 20040209118 | A1 | 20041021 | US 2004-792136 | 20040306 |
| US 7501788 | B2 | 20100126 | | |
| EP 1603990 | A2 | 20051214 | EP 2004-717900 | 20040305 |
| CN 1771313 | A | 20060510 | CN 2004-80069251 | 20040305 |
| JP 2004519477 | T | 20060824 | JP 2004-500655 | 20040305 |
| JP 4129990 | B2 | 20080806 | | |
| JP 2008172229 | A | 20080724 | JP 2008-48 | 20080104 |

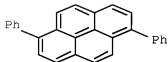
Abstract

Organic electroluminescent devices (OLEDs) are described which comprise a substrate, a first and second electrodes formed on the substrate, and a light-emitting layer formed between the first electrode and the second electrode, with the light-emitting layer having a plurality of materials and being a given luminescent material using a ligand with chemical formula I where at least one of A1' and A2' is selected from a substituted or non-substituted aromatic group, a heterocyclic group, an aliphatic group and hydrogen. The materials forming the light-emitting layer together with the material of chemical formula (I) may have the formula B1-X-B2 where X is selected from naphthalene, fluorene, anthracene, phenanthrene, pyrene, perylene, quinoline, and coquinoline, and at least one of B1 and B2 is selected from aryl, alkylaryl, alkoxyaryl, arylaminoaryl, alkylamino, and arylalkyl.

HR Structure

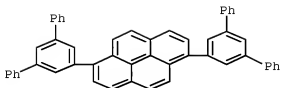
CAS Registry Number
55009-15-1 CAS105

Chemical or Trade Name
Pyrene, 1,6-bis(phenyl)- (CA INDEX NAME)



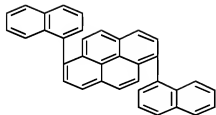
CAS Registry Number
722458-60-2 CAS105

Chemical or Trade Name
Pyrene, 1,6-bis[1,3,5-tri(phenyl)-5'-yl]- (PCI) (CA INDEX NAME)



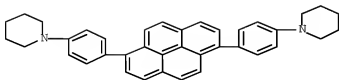
CAS Registry Number
722458-69-3 CAS105

Chemical or Trade Name
Pyrene, 1,6-di-1-naphthalenyl- (CA INDEX NAME)



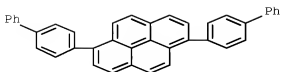
CAS Registry Number
722458-70-6 CAS105

Chemical or Trade Name
Pyrene, 1,6-bis[1,3,5-pyrenediylid-4,1-phenylene]bis- (PCI) (CA INDEX NAME)



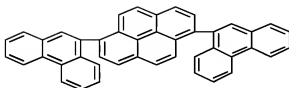
CAS Registry Number
722458-71-7 CAS105

Chemical or Trade Name
Pyrene, 1,6-bis[1,3,1'-biphenyl]-6-yl]- (CA INDEX NAME)



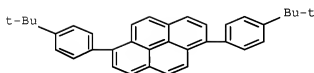
CAS Registry Number
722498-12-8 CASUS

Chemical or Trade Name
Pyrene, 1,6-bis(4-phenanthrenyl)- (CA INDEX NAME)



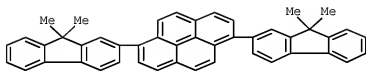
CAS Registry Number
722498-13-9 CASUS

Chemical or Trade Name
Pyrene, 1,6-bis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



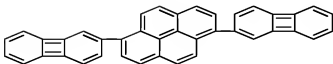
CAS Registry Number
722498-14-0 CASUS

Chemical or Trade Name
Pyrene, 1,6-bis[3,5-dimethyl-2-(n-fluorenyl)-2-yl]- (CA INDEX NAME)



CAS Registry Number
722498-15-1 CASUS

Chemical or Trade Name
Pyrene, 1,6-di-2-biphenyl- (CA INDEX NAME)



DS CITING REF COUNT: 4 THERE ARE 4 CASUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

15 ANSWER 49 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number 2004 551954 CAPLUS [Full-text](#)

Document Number 141131054

Title

Organic electroluminescent elements and spirofluorene derivatives useful in them

Author/Inventor

Vestenberg, Horst, Gerhard, Anja, Stössel, Philipp, Spenitzer, Hubert

Patent Assignee/Corporate Source

Canon Organic Semiconductors GmbH, Germany

Source

PCT Int. Appl., 30 pp. CODEN: POCXDD

Document Type

Patent

Language

German

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|------------------|----------|
| WO 2004058911 | A2 | 20040715 | WO 2003-091392 | 20031209 |
| WO 2004058911 | A3 | 20051208 | | |
| EP 1574445 | A2 | 20050924 | EP 2003-792339 | 20031209 |
| CN 1756824 | A | 20040405 | CN 2003-00107453 | 20031209 |
| CN 100489056 | C | 20090520 | | |
| JP 2004511939 | T | 20040404 | JP 2004-562714 | 20031209 |
| KR 1030159 | B1 | 20110418 | KR 2005-700942 | 20031209 |
| US 20040043027 | A1 | 20060323 | US 2005-540461 | 20050721 |

Abstract

Organic electroluminescent devices are described in which the emitting layer consists of a mixture of a hole-transporting material and a emitting material in a weight ratio (hole-transporting material/emitting material) of 1:99 to 99:1 and that a) of the substances contains a) spiro-9,9'-fluorene unit, spiro-9,9'-fluorene deriv., suitable for use in electroluminescent devices are also described

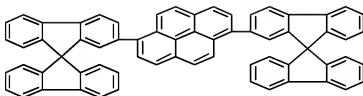
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CAS Registry Number

723295-22-1 CAPLUS

Chemical or Trade Name

5,9'-Spiro[119-11]fluorene, 2,2''-(1,6-pyrenediyl)bis- (CA INDEX NAME)

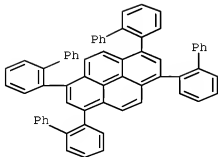


CAS Registry Number

723295-24-3 CAPLUS

Chemical or Trade Name

Pyrene, 1,3,6,8-tetrakis[1(5,1'-biphenyl)-2-yl]- (CA INDEX NAME)



09 CITING REF COUNT: 0 THERE ARE 0 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

15 ANSWER 50 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number 2004 552710 CAPLUS [Full-text](#)

Document Number 141131023

Title

Organic electroluminescent devices employing blue-emitting dopants based on amine derivatives of pyrene

Author/Inventor

Seo, Jeong Dae, Lee, Kyung Hoon, Kim, Hye Jung, Park, Chan Gwan, Oh, Hyoung Yun
 Patent Assignee/Corporate Source
 Lg Electronics Inc., S. Korea

Source
 Eur. Pat. Appl., 43 pp. COOEN EP09XDW

Document Type

Patent

Language

English

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|-----------|------------------|----------|
| EP 1437395 | A2 | 200405714 | EP 2003-29661 | 20031223 |
| EP 1437595 | A3 | 20050831 | | |
| KR 2004057862 | A | 200405702 | KR 2003-20465 | 20030401 |
| US 20040137270 | A1 | 200407135 | US 2003-743778 | 20031224 |
| US 7700201 | B2 | 20100420 | | |
| JP 2004204238 | A | 20040722 | JP 2003-428297 | 20031224 |
| JP 3026791 | B2 | 20070606 | | |
| CN 1535089 | A | 20041006 | CN 2003-10124405 | 20031224 |
| CN 100481574 | C | 20090422 | | |
| JP 2007027779 | A | 20070201 | JP 2006-245569 | 20060911 |
| US 20100158714 | A1 | 20100624 | US 2010-714639 | 20100630 |

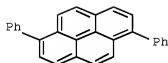
Abstract

Organic electroluminescent devices are described which comprise a substrate, a first and second electrodes formed on the substrate, an emitting layer formed between the first electrode and the second electrode, the emitting layer having a plurality of materials one of which being a blue-emitting copolymer with general formula (I), where at least one of A1 and A2 is selected from a substituted or non-substituted arylene group, a heterocyclic group, an aliphatic group and hydrogen. The materials forming the emitting layer together with the material of I may have a chemical formula B1-X-B2 where X is selected from a group consisting of naphthalene, anthracene, phenanthrene, pyrene, perylene, and quinoline and at least 1 of the B1 and B2 is selected from a group consisting of aryl, alkylaryl, alkoxyaryl, arylaminoaryl and alkylaminoaryl.

Hit Structure

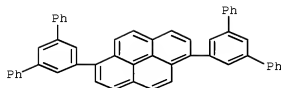
CAS Registry Number
 515059-15-1 CAS103

Chemical or Trade Name
 Pyrene, 1,6-diphenyl- (CA INDEX NAME)



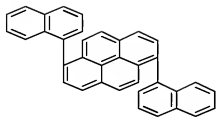
CAS Registry Number
 722490-60-2 CAS109

Chemical or Trade Name
 Pyrene, 1,6-bis[4(1,3,5-trimethylphenyl)-5'-yl]- (SCI) (CA INDEX NAME)



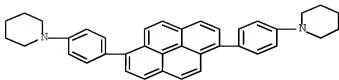
CAS Registry Number
 722490-60-3 CAS109

Chemical or Trade Name
 Pyrene, 1,6-di-1-naphthalenyl- (CA INDEX NAME)



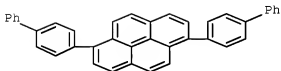
CAS Registry Number
722498-10-6 CAPLUS

Chemical or Trade Name
Piperidine, 3,3'-[1,6-pyrenediylidene-4,1-phenylene]bis- (PCI) (CA INDEX NAME)



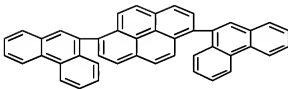
CAS Registry Number
722498-12-7 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-bis[1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



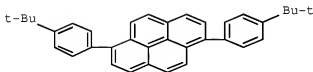
CAS Registry Number
722498-12-8 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-di-3-phenanthrenyl- (CA INDEX NAME)



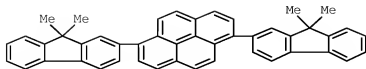
CAS Registry Number
722498-13-9 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-bis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



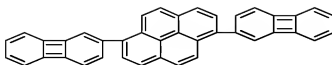
CAS Registry Number
722498-14-0 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-bis(9,9-dimethyl-9H-fluoren-2-yl)- (CA INDEX NAME)



CAS Registry Number
722498-15-1 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-di-2-biphenyl-1- (CA INDEX NAME)



DB CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (39 CITINGS)

LS ANSWER 51 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
200416267 CAPLUS Fulltext

Document Number
140 205402

Title
Oligarylene derivatives for organic electroluminescent devices

Author/Inventor
Kido, Hirotugu; Matsura, Masahide; Kawamura, Hisayuki

Patent Assignee/Corporate Source
Idemitsu Kosoan Co., Ltd., Japan

Source
PCT Int. Appl., 35 pp. CODEN: POCX2D

Document Type
Patent

Language
Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|------|----------|------------------|----------|
| WO 2004016875 | A1 | 20040324 | WO 2003-391097.1 | 20030907 |
| JP 2004075567 | A | 20040331 | JP 2002-234933 | 20020912 |
| KP 1533290 | A1 | 20050525 | KP 2003-789055 | 20030907 |
| CN 1675149 | A | 20050928 | CN 2003-819058 | 20030907 |
| TW 287408 | B | 20070921 | TW 2003-122023 | 20030911 |
| US 20040134456 | A1 | 20040622 | US 2005-522544 | 20050127 |
| US 7429425 | B2 | 20080830 | | |
| US 20090008073 | A1 | 20090108 | US 2008-200237 | 20080910 |
| US 20090008074 | A1 | 20090108 | US 2008-200233 | 20080910 |

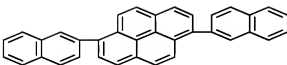
Abstract

The invention relates to oligarylene deriv. represented by Ar1-Ch-Ar2, CH1-L-CH2-Ar3-(L1a-CHb-(L2b-Ar4 and Ar5-CH4-(Ar7m-L3-Ar8)-CH5-Ar6(i)) [Ch, CH1 and CH2 = C14-20 condensed aromatic ring; CH3, CH4 and CH5 = C14-20 styrene group; Ar1-6 = aryl group containing 5-30 atoms; Ar7 and Ar8 = arylene group containing 5-30 atoms; L1-3 = connecting group, and a, b, n and m = 0 or 1]. The oligarylene deriv. are suited for use as a host material of a blue electroluminescent material in an organic electroluminescent device.

Hit Structure

CAS Registry Number
663554-20-7 CAPLUS

Chemical or Trade Name
Pyrene, 1,6-di-2-naphthalenyl- (CA INDEX NAME)



DB CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (48 CITINGS)

LS ANSWER 52 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
200437438 CAPLUS Fulltext

Document Number
140 102139

Title
Organic electroluminescent devices and displays with pyrene-containing vinyl polymer layers

Author/Inventor
Ebisawa, Akira; Ebihara, Masahiro

Patent Assignee/Corporate Source
TDK Corporation, Japan

Source
Jpn. Kokai Tokkyo Koho, 36 pp. CODEN: JPOXXP

Document Type
Patent

Language
Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2004016325 | A | 20040115 | JP 2002-166962 | 20020607 |
| JP 4068596 | B2 | 20060326 | | |

Abstract

The devices comprise organic layers containing polymers of vinyl monomers (X1-10 = H, alkyl, alkoxy, aryl, aryloxy, heterocyclic group, amino, cyano, halogen, -2 of X1-10 may form rings). Organic EL displays equipped with a panel containing multiple nos. of the devices arranged in 2-dimensional arrays are also claimed. Displays giving clear images with high luminance are obtained.

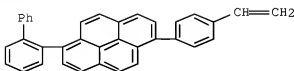
HE Structure

CAS Registry Number
643753-10-8 CAPLOS

Chemical or Trade Name
Benzo[a]anthracene, 4-ethenyl-9,10-bis(phenyl)-, polymer with
1-[1,1'-biphenyl]-2-yl-6-(4-ethenylphenyl)pyrene (9CI) (CA INDEX NAME)

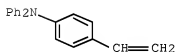
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1

CFR 643753-68-8
CMF C36 H24



OK
2

CFR 25069-74-3
CMF C20 H17 N

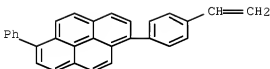


CAS Registry Number
643753-10-2 CAPLOS

Chemical or Trade Name
Pyrene, 1-(4-ethenylphenyl)-6-phenyl-, homopolymer (9CI) (CA INDEX NAME)

OK
1

CFR 643753-67-7
CMF C19 H15

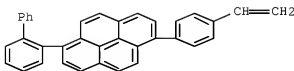


CAS Registry Number
643753-11-5 CAPLOS

Chemical or Trade Name
Pyrene, 1-[1,1'-biphenyl]-2-yl-6-(4-ethenylphenyl)-, homopolymer (9CI)
(CA INDEX NAME)

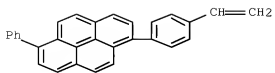
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CFR 643753-68-8
CMF C36 H24



CAS Registry Number
643753-47-7 CAPLOS

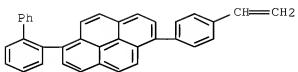
Chemical or Trade Name
Pyrene, 1-(4-ethenylphenyl)-6-phenyl-, (CA INDEX NAME)



CAS Registry Number
643751-62-8

Chapuis

Chemical or Trade Name
Pyrene, 1-(4-ethenylphenyl)-2-yl-6-(4-phenylphenyl)- (CA INDEX NAME)



L5 ANSWER 53 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2003 912685 CAPLUS Fulltext
Document Number
139.401353

Title
Electroluminescent devices

Author/Inventor
Xie, Shuang
Patent Assignee/Corporate Source
Can.

Source
U.S. Pat. Appl. Publ., 32 pp CODEN USXXCO

Document Type
Patent

Language
English

Patent Information

| PATENT NO | KIND | DATE | APPLICATION NO | DATE |
|----------------|------|----------|----------------|----------|
| US 20030215667 | A1 | 20031120 | US 2001-955204 | 20011102 |

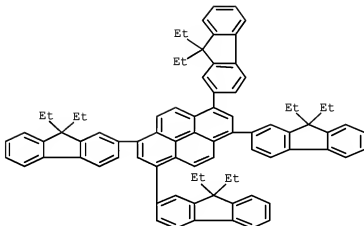
Abstract

Organic electroluminescent devices are described which are provided with active layers comprising a host based on ≥ 1 anthracene derivative doped with ≥ 1 anthracene derivative and/or coumarin derivative and/or an electron injecting/transporting layer comprising a diphenylanthracene derivative with benzocyclo derivs. attached to the Ph groups. Application to displays is indicated.

Hit Structure

CAS Registry Number
610336-30-9 CAPLUS

Chemical or Trade Name
Eyronec, 1,1,7,7,9-tetrakis(9,9-diethyl-9H-fluorene-2-yl)- (CA INDEX NAME)



08 CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L5 ANSWER 54 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2003 854588 CAPLUS Fulltext
Document Number
139.204830

Title
Organic electroluminescent elements containing organic film layer comprising 1,3,6,8-tetraphenylpyrene derivative and a carbazole derivative, and organic electroluminescent displays employing the elements

Author/Inventor
Kishimoto, Masaru, Sotayama, Wataru, Kodama, Jun, Okamoto, Yasuo
Patent Assignee/Corporate Source
Fujitsu Limited, Japan, Fujii Photo Film, Ltd.

Source
U.S. Pat. Appl. Publ., 19 pp CODEN USXXCO

Document Type
Patent

Language
English

Patent Information

| PATENT NO | KIND | DATE | APPLICATION NO | DATE |
|----------------|------|----------|----------------|----------|
| US 20030157365 | A1 | 20030921 | US 2002-278866 | 20021024 |
| US 7060370 | B2 | 20060613 | | |
| JP 2003234190 | A | 20030922 | JP 2002-29535 | 20020206 |
| JP 3041695 | B2 | 20061101 | | |
| TW 314954 | B | 20091111 | TW 2002-124739 | 20021024 |
| KR 918548 | B1 | 20090921 | KR 2002-66343 | 20021030 |

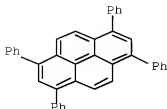
Abstract

Organic electroluminescent elements and organic electroluminescent displays employing the elements are described in which the electroluminescent elements comprise an organic thin film layer which contains a light-emitting layer between a pos. electrode and a neg. electrode, where a layer in the organic thin film layer comprises a 1,3,6,8-tetraphenylpyrene compound expressed by formula I, and a carbazole derivative expressed by formula II, in which R1 to R6 may be identical or different, and may be 1 of a H and a substituent group, Ar represents an aromatic group or heterocyclic group, and n represents an integer.

Hit Structure

CAS Registry Number
15638-02-3 CAPLUS

Chemical or Trade Name
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



CS CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(5 CITED)

L5 ANSWER 59 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2002 578802 CAPLUS E4(30)

Document Number
136 278143

Title
Organic electroluminescent devices

Author/Inventor
Suzuki, Kazuo
Patent Assignee/Corporate Source
Canon Inc., Japan

Source
Jpn. Kokai Tokkyo Koho, 26 pp. CODEN: JPOKAF

Document Type
Patent

Language
Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2003109763 | A | 20030411 | JP 2001-300546 | 20010928 |

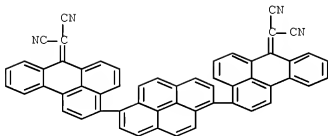
Abstract

The devices comprise a phosphor layer comprising R1-Ar1, where R1=H, alkyl, (substituted) aralkyl, (substituted) aryl, (substituted) heterocyclic, (substituted) condensed polyarom ring, (substituted) polyheterocyclic ring, Ar1 = divalency-tetravalency naphthylene, fluorenylene, anthracenylen, phenanthrenylene, vinylene, silyphenylene, thiophenylene, pyridylene, pyridinylene, pyrimidinylene, pyrazinylene, pyrazolylene, pyrazolene

Hi Source

CAS Registry Number
503472-80-5 CAPLUS

Chemical or Trade Name
Propenylidene-1,3,6,8-tetrakis(7n-benz[de]anthracen-3-yl)-7-ylidene]]bis- (PCT) (CA INDEX NAME)



| | | | | |
|----------------|----|----------|----------------|----------|
| JP 2002329580 | A | 20021115 | JP 2002-36904 | 20020214 |
| JP 3870102 | B2 | 20070117 | | |
| US 20020177009 | A1 | 20021128 | US 2002-77600 | 20020220 |
| US 6830829 | B2 | 20041014 | | |
| US 20050048318 | A1 | 20050303 | US 2004-940734 | 20040915 |
| US 6994922 | B2 | 20060207 | | |
| JP 2007013199 | A | 20070118 | JP 2006-230669 | 20060808 |
| JP 4566562 | B2 | 20101020 | | |

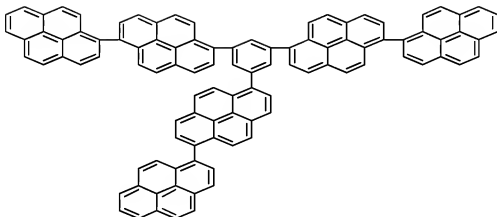
Abstract

The electroluminescent device has π organic layer containing aromatic condensed ring compound a benzene substituted with R1-4 and Ar1-2 (I), a benzene substituted with R5-7 and Ar3-5 (II), or a benzene substituted with R8-9 and Ar6-8 (III) (R1-A9 = H, alkyl, (substituted)aryl, (substituted)alkyl, (substituted)heterocycle, (substituted)amino, cyano, Ar1-A9 = (substituted)aromatic condensed ring, (substituted)condensed heterocycle, optionally linked as phenylene), preferably claimed compds. I (R5-R7 = H, Ar5-Ar9 = L1 at 1,3,5-positions, L = 9,9-dimethylfluorene-2,7-diyl, II (R5-R7 = H, Ar5-Ar9 = L2H at 1,3,5-positions), III (R8 = R9 = H, Ar6-Ar9 = L1 at 1,2,4,5-positions), or III (R8 = R9 = H, Ar6-Ar9 = L2H at 1,2,4,5-positions), an electron-transporting or light-emitting layer between a cathode and an anode. The organic layer in the device is useful as an electron-transporting layer, an emitting layer, and a hole-transporting layer and the device shows high emission, low driving voltage, and improved durability.

Hit Structure

CAS Registry Number
475460-99-2 CASLOG

Chemical or Trade Name
1,1'-Bipyrrene, 6,6'',6'''',6''''-(1,3,5-benzenetriyl)trif- ICA INDEX NAME



OF CITING REF COUNT: 17 THERE ARE 17 CASLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)

L5 ANSWER 57 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2002151119 CAPLUS Eui3xx

Document Number

136207301

Title

Organic electroluminescent device

Author/Inventor

Kohama, Toru, Nishiyama, Takuya, Makiyama, Akira

Patent Assignee/Corporate Source

Toray Industries, Inc., Japan

Source

Jpn. Kokai Tokkyo Koho, 6 pp. CODEN JKKXAF

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2002043966 | A | 20020228 | JP 2000-250684 | 20000922 |

Abstract

The invention relates to an organic electroluminescent device, suited for use in making a flat panel display, an illumination device, etc., wherein the pyrene derivative with bulky substitution groups for controlling crystallization and excimer generation, is utilized as a blue-emitting organic phosphor for enhancing the luminescence efficiency and the color purity.

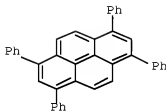
Hit Structure

CAS Registry Number

13638-82-9 CAPLUS

Chemical or Trade Name

Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



05 CITING REF COUNT: 4

THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITING)

L5 ANSWER 58 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2001039036 CAPLUS Eui3xxx

Document Number

134302822

Title

Organic electroluminescence devices

Author/Inventor

Toyama, Wataru, Hayano, Tomoaki, Sato, Hiroyuki, Matsuzawa, Akira

Patent Assignee/Corporate Source

Fujitsu Ltd., Japan; Fuji Photo Film Co., Ltd.

Source

Jpn. Kokai Tokkyo Koho, 6 pp. CODEN JKKXAF

Document Type

Patent

Language

Japanese

Patent Information

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2001119462 | A | 20010427 | JP 1999-299976 | 19991021 |
| JP 390285 | B2 | 20070418 | | |

Abstract

A blue-emitting device comprises a phosphor layer containing an alkyl derivative, a cycloalkyl derivative or an aryl derivative of 1,3,6,8-tetraphenylpyrene.

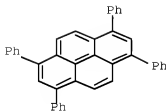
Hit Structure

CAS Registry Number

13638-82-9 CAPLUS

Chemical or Trade Name

Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



L5 ANSWER 59 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number 2000694280 CAPLUS File#300

Document Number 158358475

Title Amino or silyl compound, organic thin film, and electroluminescent device

Author/Inventor Hosokawa, Chieho; Funahashi, Masakazu; Azuma, Hisahiro; Ikeda, Shuji; Ara, Hiromasa

Patent Assignee/Corporate Source Idemitsu Kosan Co., Ltd., Japan

Source Jpn. Kokai Tokkyo Koho, 30 pp. CODEN: JIKOAA#

Document Type Patent

Language Japanese

| Patent Information | | | | | |
|--------------------|------|----------|-----------------|----------|--|
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| JP 2000273056 | A | 20001103 | JP 1999-352216 | 19991219 | |
| JP 4429438 | B2 | 20100310 | | | |
| JP 2010006818 | A | 20100114 | JP 2009-185488 | 20090817 | |

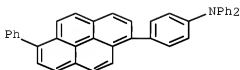
Abstract

The compound comprises DiAr(X)X₂n (1: Ar = C₆-30 di- or trivalent aromatic group, X1, X2 = silyl, styryl, diarylamino, diarylaminoaryl; n = 0, 1; if X1 or X2 = the styryl group, then D1 = C16-60 aromatic group having ≥ 4 carbon rings; if X1 and X2 = the amino group, then D1 = C20-40 aromatic group having ≥ 3 carbon rings) 1 shows good heat resistance (glass transition temperature >90°) and long luminescence lifetime.

Hit Structure

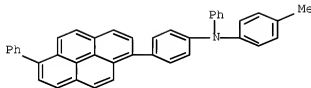
CAS Registry Number 254851-37-7 CAPLUS

Chemical or Trade Name Benzeneamine, N,N-diphenyl-4-(6-phenyl-1-pyrenyl)- (CA INDEX NAME)



CAS Registry Number 254851-25-0 CAPLUS

Chemical or Trade Name Benzeneamine, N-[4-methylphenyl]-N-phenyl-4-(6-phenyl-1-pyrenyl)- (CA INDEX NAME)



CAS Registry Number 254851-29-1 CAPLUS

Chemical or Trade Name [2,3'-Bi(phenyl)-4-onine, N-[3,3'-bi(phenyl)-6-yl]-N-[4-(6-phenyl-1-pyrenyl)phenyl]- (CA INDEX NAME)

